THIS WEEK'S National Petroleum NEWS

Coming Meetings

Fire and Safety Marshals, National Petroleum Association, Warren, Pa., May 28.

American Petroleum Institute, Division of Production, Baker Hotel, Dallas, Tex., June 3, 4.

American Society of Mechanical Engineers, National Oil & Gas Power meeting, Madison, Wis., June 15 to 18.

Society of Automotive Engineers, White Sulphur Springs, W. Va., June 15 to 19.

West Virginia Oil Marketers Association, Daniel Boone Hotel, Charleston, W. Va., June 18, 19.

American Society for Testing Materials, Chicago, June 22 to 26.

National Petroleum Association, Hotel Traymore, Atlantic City, N. J., Sept. 16, 17, 18.

American Institute of Mining and Metallurgical Engineers, Petroleum Division, Houston, Tex., Oct. 2, 3.

American Petroleum Institute, annual meeting, Stevens Hotel, Chicago, Nov. 10 to 12.

Third International Conference on Bituminous Coal, at Carnegie Institute of Technology, Schenley Park, Pittsburgh, Pa., Nov. 16 to 21.

Geological Society of America, Mayo Hotel, Tulsa, Dec. 28 to 31.

National Petroleum News

Vol. 23 No. 20

Published by

The National Petroleum Publishing Co.
1213 W. Third St., Cleveland, O.
Tel. CHerry 7672

Branch Offices:

Tulsa, 904 World Bldg., Tel. 3-7132.
New York, 342 Madison Ave., Tel. Vanderbilt 3-3950 and 3-3951.
Houston, 2420 Gulf Bldg., Tel. Fairfax 6286.
Chicago, 35 E. Wacker Drive, Tel. State 4141.

Subscription rate $3.50 per year, U. S., Mexico and Canada; $5 Foreign countries. Current copies 10 cents; for back issues more than two months old 25 cents per copy.

All contents copyrighted, 1931. Trade Mark Registered U. S. Patent Office.

Member Audit Bureau of Circulations and Associated Business Papers.

General

Fuel Oil Disposal Will Control Refinery Building in East Texas Fields 19
Excessive Capital in Oil Business Cause of Distress 23
E. W. Clark, Former A. P. I. Head Dies at Los Angeles 25
Review of Late Production News 26
A. P. I. Report of Refinery Operations, Week Ended May 16 27
S. O. Indiana Adds Two Executives to Board 28
Penalty Suits Filed Against Violators of East Texas Proration 29
East Texas Production 100,000 Bbls. above Proration Allowable 31
Gas Business Hampered by Low Price of Fuel Oil and Coal 33
Waste Carefully Defined in New California Conservation Law 37
Superior Oil Co. Completes Second Fee Land Gusher in Kettleman Hills 44
Langston and Strahan Head National Oil Scouts 45
U. S. Crude Production by Fields, Week Ended May 16 73

Merchandising

Oil Bottle Limits May be Lifted at Meeting of State Dealers 28
Merchandising and Jobbing Ideas Marketers are Using 65
Independent Refiner Enters East Florida Market 69
Stations Sell More Than Tire, Battery Stores and Garages 70

Engineering

Salt Water Makes Rapid Progress in Oklahoma City Pool 40
New Long Distance Gas Lines Will Increase Natural Gasoline Supply—*by W. E. Reardon* 46
Effect of New Natural Gasoline Grading System on Plant Operations—*by R. C. Alden* 51
New Refining Patents 61

Markets

Chicago, General Market Situation Unchanged 77
Mid-Continent, Heavy Trading Bolsters Naturals Market 79
Refinery Price Tables 80, 82, 83
California, Inquiry Active for Intercoastal Shipments 86
Pennsylvania, Market Generally Unchanged 86
Eastern, Gasoline Prices Reduced 0.5 to 0.75 Cent 88
Gulf, Lower Prices Fail to Attract Buyers 88
Gulf Lubes Low 88
Wax, Trading Quiet 88
Complete Seaboard Prices 90
Tank Wagon Price Tables 92, 93
Aviation Gasoline Price Tables 93
Crude Oil Prices, All Fields 95, 97

Departments

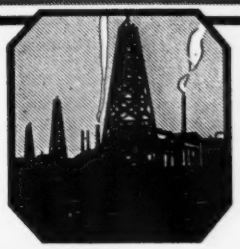
New Patents 62
New Stations Building 66
Letters to the Editor 67
On the Lazy Bench 71
N.P.N. Service Record 75
Oil Trademarks for Copyright 89
Oil Company Finance 98, 100, 101, 102

E. V. WEBER, president of the Ohio Petroleum Marketers Association, has been working for the welfare of the Independent marketer a good many years. Before the Ohio association was formed nine years ago Mr. Weber was active in the Cincinnati Oil Club which did much to foster better marketing conditions in Cincinnati and surrounding territory.

Mr. Weber entered the oil industry as a salesman 15 years ago. Nine years ago he organized the Eureka Oil Co., of which he is president and general manager. The company has headquarters at Reading, a suburb of Cincinnati.

NATIONAL PETROLEUM NEWS

Published at
1213 W. Third St.
Cleveland



Branch Offices
Tulsa, New York, Houston, Chicago

Vol. 23 **CLEVELAND, May 20, 1931** **No. 20**

Fuel Oil Disposal Will Control Refinery Building in East Texas Fields

By Arch L. Foster
N. P. N. STAFF WRITER

TULSA, May 15

EXPANSION of the refining capacity of the East Texas area, to take care of the large amounts of crude now being produced there, will be determined by the extent of the outlets available for the large percentage of fuel oil produced by topping plants, according to the views expressed by several East Texas and Louisiana refiners who have been consulted.

Under the flood of crude which has inundated that part of the southwest, varying from 330,000 barrels per day at the peak, to around 200,000 barrels as at present under the constricting efforts of proration, the problem of disposal of fuel oil produced at a topping plant, which may amount to as much as 60 per cent of the crude charged, is becoming acute, and must be solved satisfactorily before a new plant can hope to succeed for any great length of time.

In fact, this factor is the chief deterrent to the construction of several topping plants which have been considered by various individuals and organizations within the last two months. Of nine railroads which are important in this locality, eight use fuel oil in locomotives and for other purposes. These roads represent almost the entire outlet for fuel oil from this section, the amount which could be used by other local industries being relatively small, unimportant in the total which could be produced from the East Texas crude available.

While figures are not available to show the maximum amount of fuel which is required by these railroads, this amount is necessarily limited; therefore the market for fuel oil is limited, and within any relatively short period of time is only slightly expandable, even when the commodity is sold at extremely low prices, such as a few of those prevailing at present.

The general opinion at present is that those refiners who have no definite contracted outlet for at least a large portion of their fuel oil production, and who therefore must throw most or all of the heavy residuum produced, into the open market, may find difficulty in disposing of this fuel at such a price as to make refining operations profitable. This view appears to be strengthened materially by the very low price of gasoline at the refinery in this locality and all over the country, which is too low to enable the refiner to shift any great portion of the operating expense onto that product.

While the reports are not verifiable at present, practically every person who is acquainted with the general situation has expressed the belief that inability to perfect definite arrangements for suitable disposal of fuel oil has prevented the completion of arrangements for the construction of several plants which have been considered as probabilities. These plants, in almost every case, have been construction of several plants projected by producers seeking a better and more permanent outlet for crude being produced.

Only Three Plants Operating

The East Texas Refining Co., affiliated with the Burford Oil Co., is operating two topping plants in the area. The first plant to begin operations in East Texas was this company's 6000-barrel plant near Henderson, Texas, which has been going for several weeks. This plant consists of a pipe still, fractionating

Table 1

CRUDE OIL ANALYSIS

WELL, J. W. Olvey No. 1—Bateman Pool; COUNTY, Rusk; STATE, East Texas.

A.S.T.M. DISTILLATION

GRAVITY	37.5	
I. B. P.	120°F.	
10%	210	
20	278	
30	356	
40	450	
50	550	
(Steam)	34%	392°F
	38%	437
	44%	500
	57%	600
COLOR	0—	
B. S. & W.	.2%	
COLD TEST	0—	
ASPHALT	1.13%	
SULFUR	.235%	

SUBJECT:

Approximate yields and properties of cuts of crude from J. W. Olvey No. 1, Rusk County, East Texas. (N-Rusk co., Crimm, Bateman pool)

Cuts	Yield	Gravity
Gasoline	33.3	58.9
Kerosine	12.5	40.9
Gas Oil	14.8	33.9
Base	36.6	26.1
Loss	1.8	.....

TESTS ON GASOLINE

Grav.	58.9
I. B. P.	114
10	160
20	188
50	246
90	356
EBP	416
Doctor	Sour
Sulfur	.031

TESTS ON KEROSINE AND GAS OIL

Grav.	40.9	33.9
Sulfur	.089	.157
Pour	.....	45

TESTS ON BASE

Grav.	26.1
Flash	265
Fire	425
Vis at 210	85
Vis at 100	1300*
Vis. Index	57
Pour	90
Color	0 (in dil.)
Sulfur	.684
Asphalt	3.31

*This viscosity at 100 was calculated from the viscosities at 210 and 130°F on account of the pour point being too high for viscosity determination at 100°F.

Table 2

CRUDE OIL ANALYSIS

WELL, Tex Lloyd No. 1; COUNTY, Rusk; STATE, Texas.

A.S.T.M. DISTILLATION

GRAVITY	38.9	
I. B. P.	122	
10%	228	
20	284	
30	358	
40	456	
50	550	
(Steam)	20	284
	34	392
	36	437
	44	500
	56	600
COLOR	0—	
B. S. & W.	.4	
COLD TEST	0—	
ASPHALT	.48	
SULFUR	.268	

SUBJECT:

Approximate yields and tests on cuts of Crude from Rusk County, Tex. Lloyd No. 1.

Cut	Yield	Gravity
Gasoline	35.8	57.4
Kerosine	8.8	41.0
Gas Oil	18.8	35.0
Base	35.0	22.9
Loss	2.4	.....

TESTS ON GASOLINE

Gravity	57.4
I. B. P.	130
10	176
20	200
50	258
90	364
EBP	418
Doctor	Sour
Sulfur	.058

TESTS ON KEROSINE AND GAS OIL

Gravity	41.0	35.0
Sulfur	.073	.186
Pour	.....	35

TESTS ON BASE

Gravity	22.9
Flash	390
Fire	445
Vis. at 210	81
Vis. at 100	1600
Vis. Index	9
Pour	90
Color	⅛ in dil.
Sulfur	.487
Asphalt	2.77 (ck)

tower, condensers, exchangers, a cooling tower, and treating and storage equipment necessary to take care of the plant's crude and products.

The second plant of this company recently began operations with one of two 6000-barrel topping stills, and is located about 1½ miles from Longview, near the Texas and Pacific railroad. The second unit of the same capacity is in course of construction, the bubble tower and pipe stills being installed now by the plant force. The entire construction work has been designed and carried out by the company engineers.

The stills are of conventional type without special alloy tubes since the crude is remarkably non-corrosive. The towers are equipped with approximately 20 plates, with suitable temperature indicators and liquid level and reflux controls. Towers were manufactured by the Wyatt Metal and Boiler Works, using Petroleum Engineering Inc.'s plates as were the exchangers.

Seven tubular heat exchangers are provided for the two units. Two 300-B. H. P. Heine water-tube boiler will furnish steam for all purposes, only one of which is being used so far. Two 10,000-barrel tanks are provided to handle the crude from the field, with the necessary run-down and shipping tanks to complete the plant.

Although the plant has been in operation for some time, not all the buildings are completed, the pump house and control house being in course of erection. An extensive loading rack completes the facilities of the plant.

The Beacon Oil and Refining Co.'s 3000-barrel topping plant is located northwest of Henderson, Texas, and has been operating for some weeks.

Few Other Plants Building

Slack Petroleum Co. has begun the erection of a 3000-barrel topping plant a few miles west of Longview, in the neighborhood of Willow Springs, to take care of that company's production in the Lathrop pool, the most northerly of the fields.

Officials of the Taylor Refining Co. state that their 15,000-barrel topping plant in the vicinity of Tyler is well along toward completion, and that they expect to begin operation by the first of June. The Amarillo Producers and Refiners interests have begun work on a 3000-barrel skimming plant according to reports, but the status of this plant has not been determined.

Report also has it that work on the Boone Refining Co.'s 1000-barrel plant near Arp is discontinued. Nothing is known of the progress made on the Arrow Refining Co.'s 2000-barrel plant reported to be building north of Overton.

Rumors have been circulated that plants were being planned by The Primrose Petroleum Co., The McMillan Petroleum Corp., and several other groups, most of them being local interests with production to be disposed of.

McMillan officials state that the report that they were completing plans for a plant to be built immediately was without authorization from the company, that the matter had been considered, but that nothing whatever of a definite nature had been decided on and they can make no statement regarding the status of the supposed plant. Reports regarding several other rumored plants are conflicting.

East Texas Crude Easy to Refine

According to refiners who are best acquainted with Mid-Continent crudes, the East Texas crude is somewhat similar to

Oklahoma City crude, from a refining viewpoint. It is sweet, non-corrosive and low in sulfur. The sulfur content is as low as 0.20 per cent or lower, and seldom higher than 0.25 per cent, and relatively non-reactive in nature.

No details of the types of sulfur compounds found are as yet available, the laboratory studies that have been made, so far as have been made public, being directed toward results of immediate interest in determining details of plant operation.

Laboratory yields of the various products are given in the accompanying tables, showing gasoline content from 33 per cent to as high as 40 per cent or greater in some reports that have been studied. The gasoline sulfur is attractively low, varying from traces to as high as 0.07 per cent. The naphtha is sometimes slightly sour, frequently sweet, when distilled, and in every case investigated is sweetened and ready for market after a light caustic wash, without acid or doctor treat.

Some refiners are using doctor on both gasoline and kerosine cuts, but others have found that this is not at all necessary. One well known plant operator has found that, in a continuous treater, fifty barrels of 12° Be. caustic solution has sweetened nearly 100,000 barrels of light naphtha as is still giving perfect results, without replacement. This motor fuel is non-corrosive and has not shown any tendency to go off-color in several weeks' exposure to sunlight in clear four-ounce bottles.

This same refiner runs the crude to gasoline, kerosine, gas oil, and then slightly cracks the residuum to obtain a 40 F. pour point, producing an additional 8 to 9 per cent of gasoline, the remainder being disposed of as fuel oil on railroad contract. This cracked gasoline may be treated with two pounds of acid to obtain a 24 color Saybolt, low gum, and is stable to sunlight.

Kerosine yields quoted by different refiners vary from two per cent to 12 or 15 per cent, depending on the manner of cutting the distillation. In some cases slight acid treats of about two pounds per barrel are used to sweeten and remove color. One operator, after using acid for some time, found that, by merely caustic washing, a better illuminant is obtained, and has therefore stopped the acid treat.

In topping the crude from the Lathrop pool, one plant obtains approximately 40 per cent gasoline, up to 30 per cent gas oil, and varying amounts of kerosine dependent on the market for this and other products made. The gasoline made is 80-95 initial, 410-420 F. end point, and, according to the report of the chief chemist, requires one and one-fourth cc. of Ethyl fluid to equal the Ethyl standard.

Another refinery using pipeline oil finds that 2½ cc. are required to bring its straight-run fuel up to standard. Statements from several technologists indicate that the fuel is fairly susceptible to ethylization, comparable to north Texas and Oklahoma gasolines.

Gas and Fuel Oils Have High Pour Point

One of the peculiarities of the gas oil being produced by

Table 3

Label Rusk County crude from Hinkle Pump Station — Crude Rusk County; Date 2-4-31; Received 2-4-31

TESTS ON CRUDE

Grav.	Flash	Fire	Tar No.	Vis. at 50° F.	Vis. at 100° F.	Pour Point	B.S. & W.	Sulfur	Color
39.2	BRT	BRT	14	100	42	0	0.2		Black

Distillation of 2 liters sample at atmospheric pressure. Overpoint 69° F.

Cuts	Vapor Temp.	Gravity	Grav. on Composite	Cuts	Vapor Temp.	Gravity	Grav. on Composite	Cuts	Vapor Temp.	Gravity	Grav. on Composite
2.5	122	85.7		32.5	376	46.4	60.5	62.5	668	32.4	35.5
5.0	149	80.0	82.8	35.0	393	44.6	59.5	65.0	685	31.9	35.2
7.5	180	72.2	73.9	37.5	416	42.9	58.8	67.5	696	31.6	34.8
10.0	215	64.9	75.7	40.0	432	41.4	41.4	70.0	704	31.3	34.6
12.5	230	61.6	72.8	42.5	524	39.3		72.5	710	31.3	34.3
15.0	242	59.3	70.6	45.0	538	37.8	38.5	75.0	718	30.9	34.0
17.5	256	57.5	68.7	47.5	548	36.6	37.9	77.5	720	30.2	33.7
20.0	270	56.0	67.1	50.0	578	36.4	37.5	80.0	725	30.0	30.3
22.5	285	54.4	65.7	52.5	602	35.5	37.1	82.5	730	30.0	33.3
25.0	310	52.8	64.4	55.0	616	34.7	36.7	85.0	734	30.3	33.2
27.5	338	50.7	63.1	57.5	632	34.0	36.3	87.5	740	30.3	33.0
30.0	370	48.1	61.9	60.0	660	33.5	35.9	90.0	750	30.6	32.8

SUMMARY

Products	Per Cent	Vapor Temp.	Grav.	Flash	Fire	Viscosity	P.T.	Tar No.	Color
Gasoline	39.5	410	58.5						25
Kerosine	2.5	432	41.4						
Gas Oil	45.5	750	32.8	150	215	55/100	80	4	3½-4
Residue	9.5	750	9.8	330	515	806/122	115		
Loss	3.0								

Saybolt Distillation On Gas Oil

Gravity	32.8		
I.B.P.	298		
10%	500		
20%	535		
30%	560		
40%	590	% at 374° F.	0.5
50%	624	% at 392° F.	1
60%	658	% at 410° F.	2
70%	700		
80%	750		
90%			
95%	Aniline No. = 176° F.		

A.S.T.M. Distillation On Gasoline Cut

Gravity	58.5	E.P.	427
I.B.P.	112	Rec.	97.5
10%	165	Dr.	Sweet
20%	194	Sulfur	0.01%
30%	220		
40%	242	% at 221° F.	30.5
50%	268	% at 284° F.	57.0
60%	292	% at 392° F.	92.0
70%	318	K.R = Needs 2½ cc to equal Ethyl Standard	
80%	349		
90%	382		
95%	408		

% Unsaturates = 2 Babcock method
% Unsaturates = 5 Egloff & Morell Method
% Aromatics = 3
% Naphthenes = 25
% Paraffins = 67

Table 4

Date April 6, 1931
Crude Oil from Ark. Fuel et al Lathrop No. 1 Gregg Co. Texas
Specific Gravity 0.826 Gravity A.P.I. 39.8°
Cold Test (Flow) —25° F. Sulfur 0.23%

%	Temp. ° F.	Gravity of Fraction	Gravity of Total Over	Gravity of Stream	Product
0....	89				
	131			0.648 =86.9°	
5....	158	0.648 =86.9°	0.648 =86.9°	0.666 =81.0	Gasoline
	181			0.684 =75.4	"
10....	201	0.684 =75.4	0.666 =81.0	0.701 =70.3	
	218			0.719 =65.3	"
15....	235	0.719 =65.3	0.684 =75.4	0.730 =62.3	
	248			0.741 =59.4	"
20....	266	0.741 =59.4	0.698 =71.2	0.750 =57.2	
	285			0.760 =54.7	"
25....	304	0.760 =54.7	0.710 =67.8	0.768 =52.7	
	323			0.775 =51.1	"
30....	350	0.775 =51.1	0.721 =64.7	0.783 =49.2	
	370			0.791 =47.4	"
35....	392	0.791 =47.4	0.731 =62.1	0.800 =45.4	
	418			0.808 =43.6	"
40....	444	0.808 =43.6	0.741 =59.4	0.815 =42.1	Kerosine
	464			0.822 =40.6	"
45....	484	0.822 =40.6	0.749 =57.4	0.827 =39.6	
	504			0.832 =38.6	"
50....	524	0.832 =38.6	0.758 =55.2	0.839 =37.1	
				0.845 =35.9	"
55....	Steam	0.845 =35.9	0.766 =53.2	0.848 =35.3	Gas Oil
				0.851 =34.8	
60....		0.851 =34.8	0.773 =51.5	0.855 =34.0	Wax distillate
				0.859 =33.2	"
65....		0.859 =33.2	0.779 =50.1	0.866 =31.9	
				0.873 =30.6	"
70....		0.873 =30.6	0.786 =48.5	0.880 =29.3	
				0.887 =28.0	"
75....		0.887 =28.0	0.793 =46.9	0.893 =26.9	
				0.900 =25.7	"
80....		0.900 =25.7	0.799 =45.6	0.906 =24.7	
				0.913 =23.5	"
5....		0.913 =23.5	0.806 =44.0		

Specific Gravity of residuum =0.971 =14.2°

Summary of Natural Products Skimming Distillation

Gasoline (59.7°)	37.5%	
Kerosine (40.9°)	12.5%	
Gas Oil (35.9°)	5.0%	
Wax Distillate (29.3°)	30.0%	Benzol Equivalent of straight run gasoline 11.0%
Residuum (14.2°)	15.0%	
	100.0%	

most refiners from this crude is the excessively high pour obtained. Most of this gas oil shows a 60 to 70 F. pour, and no figures were obtained showing a pour lower than 35 F. Depth of cut for gas oil is of course the controlling factor, and the cut is otherwise especially adapted to use as furnace oil or diesel fuel, and cracks easily with relatively little coke, treating costs and losses comparing with those from Mid-Continent gas oils.

Without slight cracking to reduce viscosity and pour the fuel oil obtained pours at 90 to 120 F., and is difficult to handle in cool weather. The cracking referred to above, which produced about 9 per cent gasoline in passing through a tube still, reduced the pour to about 50 F. suitable for locomotive fuel.

The asphalt content of the crude is appreciable, varying from one-half per cent to one per cent or more, and running as high in the residuum (36 per cent on the crude) as 3.31 per cent.

On account of the large gas oil fraction cracking yields of gasoline are large. One refiner found on test runs that 70 per cent of the crude could be made into gasoline, when running the residue to coke and gas. Another is regularly obtaining the following average yields:

Total gasoline	58%
Total Gas Oil	2%
Total Fuel Oil	32%
Gas, coke and loss	8%
Total	100

The octane number of this blended gasoline is between 50 and 60.

Refiners generally in this locality do not consider that cracking will pay under present prices for crude and finished gasoline. At a refinery price of four cents per gallon for motor fuel, one refiner stated that his company would be glad to operate their cracking plant, but that under present conditions this will not be done. Another plant which has been cracking the residuum quoted the cost of cracking at 32 cents per barrel of gasoline, with treating and loss costing 7 cents, totaling 30 cents per barrel.

No definite figures are obtainable from refiners regarding the lubricating oil content of the crude. This fraction is stated to be relatively narrow, the gas oil cut being wide. The wax content is very high as indicated by the pour point, and apparently a considerable proportion of it is low melting point and "amorphous."

One refiner well acquainted with this and similar crudes states that the lubricating cut would be between five and ten per cent of the crude. Opinions expressed by several well-informed technologists indicate that the lubricants that could be made from this crude would be good quality, equal to the best from other sources in the Mid-Continent, but the yield would be relatively small, and the expense of wax removal high. None of the local refiners is planning to manufacture lubricants from the crude so far as is known.

Supreme Court Upholds Hoover Land Policy

By Telegraph

WASHINGTON, May 18.—The U. S. Supreme Court today upheld the oil conservation policy of President Hoover as applied to public lands. The court sustained action of lower courts which had refused to mandamus Secretary of the Interior Wilbur to issue permits to prospect for oil and gas on public lands.

The court took judicial notice of the fact that there has been an enormous increase in production "and a consequent troublesome surplus."

A. Y. McDonald Mfg. Co., Dubuque, Ia., is calling attention of the oil jobbing trade to the McDonald unloading device, providing a convenient method of handling oils direct from tank car to barrels or drums. Gravity flow is obtained with a pump and oil is strained before going through the filler.

The device includes an automatic barrel filler with eight-foot flexible steel hose, strainer connection, and Spanner wrench.

Excessive Capital in Oil Business Cause of Distress--Teagle

W. C. Teagle on Gasoline Markets

W. C. TEAGLE, president, Standard Oil Co. (N. J.), in his annual report summed up 1930 marketing experience as follows:

"In order to obtain a market for their increased crude production some producers, who are also refiners, manufactured too much gasoline. They and other refiners, who purchased their crude under posted prices, dumped their gasoline upon the distributor, and the latter found but one way to place it with the consumer—by cutting prices.

"Thus instead of allowing the customer to dictate the amount of gasoline needed and the refiner, in turn, to notify the producers of the crude required to supply this quantity of gasoline, the process has been completely reversed.

"The disastrous result of such a policy was experienced in 1930 when gasoline was sold primarily to get it out of the tanks and make room for more. Efforts to dispose of this surplus led to the granting of excessive discounts and other forms of price concessions, as well as to competition for outlets at points far removed from the logical geographical marketing areas.

"The pressure of surplus supplies continued to expand retail outlets of which there are now at least three for every one needed to serve the consumer conveniently and expeditiously. The amount of capital tied up in filling stations built in duplication of existing adequate outlets is everywhere evident and the investment and labor charges incident to their operation account for a large part of today's high marketing expense.

"A moratorium upon the building of more service stations, closing those which cannot be operated economically, and abandonment of unsound marketing practices would benefit the industry and public alike."

CLEVELAND, May 18

OUR industry has been afflicted with too much unneeded capital the last 10 years, in the opinion of W. C. Teagle, president, Standard Oil Co. (N. J.). He expresses, in substance, this view in the concluding remarks of his annual report.

The abundance of capital has brought an overexpansion of all facilities in the industry, causing a competition that has impaired its earning power. The New Jersey and affiliated companies suffered with a majority of the industry last year. Its net profits shrank to $42,150,662.62, compared with $120,912,794.06 in 1930; $108,485,686 in 1928, and $40,422,857 in 1927.

Its average net was $1.65 a share on 25,518,468 $25 par shares last year, compared with $4.75 a share on 25,418,968 shares in 1929.

Concerning the oil industry situation in general, Mr. Teagle wrote:

"Over the past ten years the industry has attracted capital in excess of its actual requirements resulting in an over-expansion of all its facilities. Even if the past year had been one of normal growth the demands of the consuming market would have fallen far short of employing to its full capacity the machinery of the industry.

"In 1930, as in previous years, the competitive effort to keep production and manufacturing plants in operation told heavily upon earnings. Had the industry not delayed in adjusting posted prices of crude to product prices, some of the unnecessary drilling might have been avoided.

"So long as present conditions continue the restoration of the industry to a sound economic basis cannot be foreseen. Time will necessarily be required for correction.

"In the meantime, the industry must seek through reduction of operating and administration costs such relief as it may be able to obtain, until the absorption of its surplus stocks removes the incentive to overcompetition which has so severely affected its earning power.

"The anomaly of both raw material and finished products selling below cost necessarily carries its own eventual correction, and there are not lacking certain signs that this economic force already is exerting itself. The remedial measures from which the industry will benefit include the action of federal and state governments in prorating producing fields, restrictions on drilling and the extension of the policy of unit operation to new pools.

"In addition the industry should continue to draw upon stocks until they are materially reduced and should regard as a definite part of its reserve not only oil above ground, but also the shut-in production in competitive areas.

"The traditional policy of the Standard Oil Co. (N. J.) has been to build up out of earnings a substantial reserve for the purpose of expanding its operations and strengthening its posi-

Standard of New Jersey Oil Operations at a Glance

(From annual reports)

(Amount in barrels unless otherwise stated)

	1930	1929
Crude oil production:		
In the United States	51,906,114	*51,657,552
In foreign countries	50,612,368	*49,442,546
Total production	102,518,482	*101,100,098
Proportion of own production to runs of crude at company refineries	56.7%	51.6%
Crude oil stocks, end of year	55,561,526	52,596,526
Natural gasoline production:		
In the United States	3,261,000	3,226,000
In foreign countries	1,624,000	1,224,000
Total refinery runs, home and abroad	180,676,000	196,797,000
Daily average runs in U. S.	363,716	409,098
Daily average runs abroad	131,285	130,072

*From 1929 report; 1930 report mentions increase of 606,743 barrels which indicates total of 101,911,739 barrels in 1929.

tion. The result of this policy today is that the company's cash resources enable it to face the future with confidence."

In his review of the 1930 situation Mr. Teagle said:

"The average wholesale price of gasoline in the Mid-Continent during 1930 was 5.72 cents per gallon, as against 7.21 cents per gallon in the preceding year, a reduction of 20 per cent. On the other hand, the average price of all grades of domestic crude throughout the year was but 7 cents per barrel below the average price of $1.27 which prevailed in 1929, a decrease of but 5½ per cent. Thus the average price of crude failed to reflect its real value as expressed by the gasoline markets.

"Efforts were made by state and federal officials to stabilize the situation. A committee on economics appointed by the Federal Oil Conservation Board reported that the market demand for the last nine months of the year could be supplied from a daily average production of 2,495,000 barrels. Production did not exceed this figure. The board's suggestion that refiners reduce their runs by approximately one day's output per week was not, however, generally followed. The effect was a surplus of gasoline."

Standard of New Jersey and affiliated companies had 7¼ per cent of the world production in 1930 and 5¾ per cent of the United States production.

The group's crude oil stocks amounted to 55,581,526 barrels Dec. 31, an increase of 2,985,000 barrels during the year. The increase was offset, Mr. Teagle stated by a decrease of a like quantity of refined oils.

In the last five years, he pointed out, total oil stocks have increased 112,000,000 barrels, or 20 per cent. In that time the New Jersey group has reduced its stocks 19,000,000 barrels or 21 per cent.

Concerning the economic status of natural gasoline he said:

"The excess of gasoline throughout the year and the low prices prevailing made it difficult to operate plants for the recovery of gasoline from casinghead and natural gasoline at a profit. Improvements in cracking and in the recovery of stable light fractions from refinery gases have taken from natural gasoline its former premium value as a necessary component of motor fuel and placed it in price competition with gasoline itself. Therefore, we now consider our natural gasoline plants as incidental to the production of crude or the distribution of natural gas."

Pipelines of the group transported 119,691,000 barrels of crude last year. The system embraced 3972 miles of trunk line the end of the year. Chief construction last year was the line from the East Texas fields 115 miles to near Shreveport, and the double 10-inch Ajax line 400 miles from Glenpool, Okla., to Wood River, Ill. Standard Oil Co. of Ohio and Pure Oil Co. are part owners of the Ajax line.

The New Jersey group has a fleet of 147 tankers and is building eight more. Orders have been placed for nine additional tankers for delivery over the next three years. Some of these vessels will replace old ships. Mr. Teagle said experience had shown that tankers used in transporting gasoline exclusively have a shorter life than when engaged in other service.

Refineries increased their efficiency, Mr. Teagle reported. Older types of crude distilling equipment are being replaced, lowering operating costs, and giving better yields of more valuable products. An alcohol and special solvents plant was completed during the year.

Mr. Teagle said the hydrogenation plant at Baton Rouge, La., will be in operation shortly and the one at Baytown, Texas, will be completed about Jan. 1, 1932. The first hydrogenation plant was put into operation at Bayway, N. J., last year.

Mr. Teagle said the volume of business of the company's marketing subsidiaries had been adversely affected where conditions did not warrant competition in the duplication of stations.

The New Jersey company's balance sheet of Dec. 31 shows current assets totaling $730,986,692, of which sum $46,657,382 was cash and $179,168,908 marketable securities at cost. Oil inventories at lower of cost or market were $233,845,360.

Income Accounts of Standard Oil Co. (N. J.) and Affiliated Companies

	1930	1929
Gross operating income	$1,381,879,279.38	$1,523,386,464.65
Costs, operating and general expenses	1,231,757,248.12	1,278,865,857.95
Taxes	29,453,535.07	37,055,418.95
Depreciation, depletion, amortization, and abandonments	84,221,402.72	79,543,059.27
Net operating income	$ 36,447,093.47	$ 127,922,128.48
Non-operating income	29,394,724.18	26,075,571.42
Income before interest charges	$ 65,841,817.65	$ 153,997,699.90
Interest and discounts	8,903,146.81	9,087,551.12
Profit for year	$ 56,938,670.84	$ 144,910,148.78
Profit applicable to minority interests	14,788,008.22	23,997,354.72
Net profit of New Jersey company	$ 42,150,662.62	$ 120,912,794.06

The decline in oil inventories over 1930 was $31,780,247 of which sum approximately $31,500,000 was due to decrease in value, Mr. Teagle stated. Current liabilities totaled $169,093,894, leaving net working capital of $561,892,796.

Total assets after depreciation, depletion and amortization reserves amounted to $1,770,993,803. Those reserves totaled $654,520,905 additional.

Funded debt of the New Jersey group totaled $169,014,083 Dec. 31. Surplus amounted to $549,252,775.

Dividends last year amounted to $50,929,686.

Mr. Teagle pointed out that marketing subsidiaries in the United States collected for state governments almost $33,000,000 in gasoline taxes. The New Jersey company and affiliates paid $29,453,535 in general and income taxes.

S.O. New Jersey Further To Develop By-Products

CLEVELAND, May 18.—Standard Oil Co. (N. J.) intends to develop its by-product business further, thereby enhancing the value of refinery residues, it is indicated in the annual report of W. C. Teagle, president. Mr. Teagle said:

"In research, studies looking to improvement of existing products and the development of new products, particularly from refinery residues and the relatively low-value fractions of the crude oil, are going forward.

"While gasoline lubricating oils, asphalts, kerosine, gas and fuel oils, etc., will continue to be the major products, related lines of merchandise specialties and other products from crude oil and natural gas should, through research activities, assume increasing importance. Such correlated diversification should promote stabilization and growth of the company's business.

"To secure patent protection permitting the company to exploit the new products, processes and apparatus which are constantly being developed by the research laboratories, we filed in 1930 163 U. S. patent applications and 190 foreign applications."

E. W. Clark, Former A.P.I. Head Dies at Los Angeles

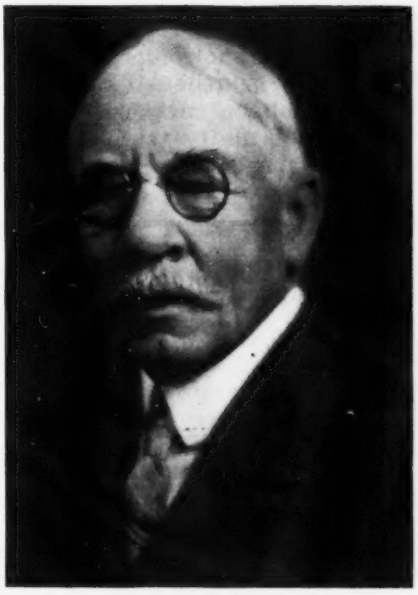
LOS ANGELES, May 14

E. W. CLARK, chairman of the board of directors of Union Oil Co. of California and a past president of the American Petroleum Institute, died May 12 of heart disease. He had spent the morning of that day at his desk in the Union Oil building and was stricken shortly after he had lunched.

Mr. Clark, who had been prominent in the oil industry a score of years, was 73 years old. He was born July 24, 1857 in New Hampshire. When still a boy he went west to seek a fortune in the Nevada gold fields but later engaged in railroading on which subject he became an authority.

From 1888 to 1897 Mr. Clark was with the Northern Pacific and Great Northern railroads. He also was with the Oregon Improvement Co. Later he managed the Pacific Coast Steamship & Railway Co.

Mr. Clark was appointed manager of the Producers Pipe Line Co. Dec. 22, 1910. This line subsequently was taken over by Union Oil. This was his initial affiliation with Union Oil Co. In 1913 he was promoted to manager of transportation for the Union. One year afterward he was elected a director and vice-president.



E. W. Clark

In 1916 Mr. Clark was appointed general manager of Union, a position which later carried the title of executive vice-president. He resigned this position in 1929 but continued as a director. He was elected chairman of the board.

Mr. Clark was an active worker in the American Petroleum Institute and served two terms—1927 and 1928—as president. He participated in a great deal of the early conservation work.

Mr. Clark's connection with the oil industry antedated his connection with Producers Pipe Line. He and associates drilled their first well in the old Santa Maria field in California in 1901. The well is owned now by the Union.

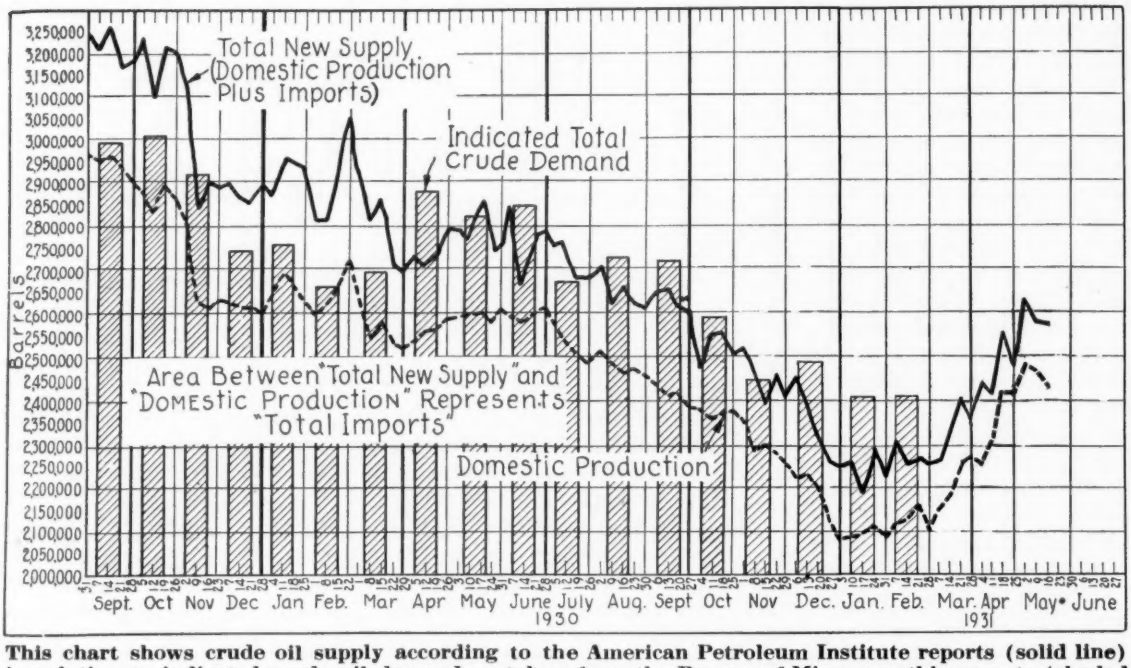
Mr. Clark became widely known in the oil industry east of California during the war when he was a member of the fuel administration. After the war his acquaintanceship in the industry continued to grow. The growth culminated in his election to the presidency of the institute in December, 1926, at which time he said: "I am happy. I have been honored by the greatest body of men in the world—the American Petroleum Institute."

Pennsylvania Bill Hits Exclusive Sales Plan

CLEVELAND, May 18.—A bill aiming to prevent exclusive sales contracts has been reported out by the judiciary special committee of the house of the Pennsylvania Assembly.

The bill is intended primarily to eliminate exclusive sales contracts covering motor oils as developed under the lease and agency form of outlet control.

Review of Late Production News


Total New Supply (Domestic Production Plus Imports)
Indicated Total Crude Demand
Area Between "Total New Supply" and "Domestic Production" Represents "Total Imports"
Domestic Production
Barrels
Sept. Oct Nov Dec Jan Feb. Mar Apr May June July Aug. Sept Oct Nov Dec. Jan. Feb. Mar. Apr May June
1930
1931

This chart shows crude oil supply according to the American Petroleum Institute reports (solid line) in relation to indicated crude oil demand as taken from the Bureau of Mines monthly reports (shaded columns).

DAILY average crude production decreased 42,000 barrels the week ended May 16, to 2,426,800 barrels, according to the American Petroleum Institute. The largest changes were in Oklahoma, which decreased 34,000 barrels; East Texas, which declined 11,500 barrels and West Texas, which declined 5000 barrels.

Imports of crude were nearly 150,000 barrels daily average, or 36,500 barrels more than the previous week. Total new crude supply was 2,573,-950 barrels, a slight decline from the week ended May 9.

California

SUPERIOR OIL CO.'S Huffman 2, North dome of Kettleman Hills, was completed late in the week for an estimated production of between 10,000 and 11,-000 barrels per day. On fee land, this well further complicates the situation in California by giving Kettleman Hills an actual daily production of over 53,000 barrels daily and a potential of nearly 90,000 barrels.

In the Ventura district, the Chanslor Canfield Midway Oil Co. reported its Hobson A-2 well at 10,010 feet. This project is midway between the Ventura Avenue and the Rincon fields, approximately two and one half miles west and north of the former. Showings have been only fair with a very low gas pressure and after drilling for another 50 feet it is expected the crew will plug back to test some showings found at about 8600 feet.

Texas, New Mexico, Louisiana

ALTHOUGH Permian salt basin production from West Texas and southeastern New Mexico has been cut a few thousand barrels daily to less than 250,000 barrels, total crude oil distribution shows a gain of nearly 40,000 barrels daily. Pipeline runs have been increased from 212,000 barrels daily to 244,000 barrels; West Texas refineries increased runs from 27,000 to 35,000 barrels daily.

East Texas proration continues 90-odd per cent effective, notwithstanding injunction suits of the non-conformist group which prevent curtailment of their properties.

At Sweet Lake, South Louisiana, Pure Oil Co.'s No. 10 Yount-Lee fee, is a deep horizon discovery at 7387 feet, making 1500 barrels daily through three-eighths inch choker. Earlier Sweet Lake wells produced at 5300-6800 feet.

Crude and Gasoline Stocks

(In Barrels)

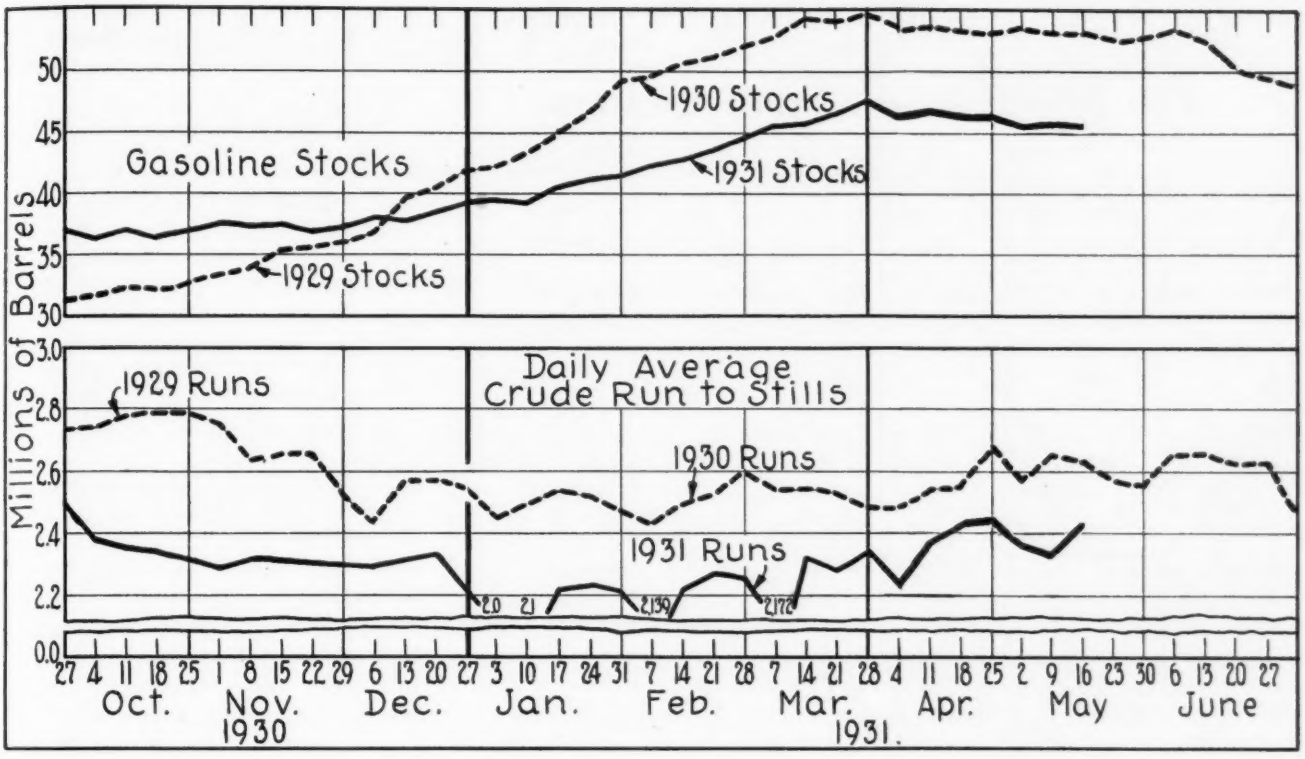
Crude stocks, March 31, 1931	499,210,000
Crude stocks a year ago	538,281,000
Gasoline stocks, March 31, 1931	47,773,000
Gasoline stocks a year ago	55,228,000

Current production in this country by pools is found on page 73.

Oklahoma, Kansas

FIELD development in Oklahoma and Kansas were again of a routine character, emphasizing the let-up that has occurred in drilling in the past few months. Oklahoma City production was held below the 175,000 barrels daily allowed under corporation commission order, thus averaging nearly 50,000 barrels less daily than in the preceding week.

U. S. Crude Runs and Gasoline Stocks as Reported Weekly by A. P. I.



Gasoline Stocks Reduced 147,000 Barrels

By Telegraph

NEW YORK, May 19

DEMAND for gasoline at refineries increased sharply in the week ended May 16 according to reports gathered by the American Petroleum Institute.

Runs of crude oil to stills were increased 107,700 barrels daily average by reporting refiners and gasoline stocks were reduced 147,000 barrels. In the previous week gasoline stocks had increased 197,000 barrels on the much lower rate of manufacture.

The increase in gasoline demand was felt chiefly by refiners on the East Coast and in California. Runs to stills in the East Coast group were increased 50,800 barrels during the week and stocks of gasoline were reduced 273,000 barrels. Refiners in this group were utilizing 80.4 per cent of their still capacity during the week as compared with 68.2 per cent for the country as a whole.

California refiners drew 256,000 barrels of gasoline from storage but made little change in crude runs. In the previous week California refiners had increased their motor fuel stocks 230,000 barrels.

Substantial increases in stocks were reported by Texas, Oklahoma-Kansas and Indiana-Illinois refining groups. The total increase in gasoline stocks in the three groups was 506,000 barrels.

Current Refinery Operations

Districts	Per Cent Capacity Reporting	Daily Average Crude to Stills (Barrels) Week Ended		Per Cent of Reporting Capacity Operated Week Ended		Stocks (Thousands of Barrels)				Cracked % of Total Capacity Reporting	Gasoline Production Daily Av. Production (Barrels) Week Ended	
		May 16	May 9	May 16	May 9	Gasoline May 16	Gasoline May 9	Gas & Fuel Oil May 16	Gas & Fuel Oil May 9	May 16	May 16	May 9
East Coast	100.0	492,90J	442,100	80.4	72.2	8,443	8,716	8,638	8,375	90.3	86,300	88,300
Appalachian	93.8	87,400	72,100	66.0	54.4	1,642	1,691	1,125	1,115	94.6	19,300	18,700
Ind., Ill., Ky.	97.5	332,300	336,900	87.2	88.4	6,382	6,317	3,653	3,622	95.2	85,500	96,000
Okla., Kans., Mo.	89.4	274,700	277,300	66.6	67.3	3,676	3,541	4,064	4,135	90.0	55,600	57,400
Texas	91.9	574,000	539,300	77.2	72.5	8,022	7,716	9,341	9,219	95.9	118,000	119,200
La., Ark.	98.3	170,600	162,300	65.1	61.9	2,208	2,304	2,410	2,385	97.7	33,600	25,000
Rocky Mountain	93.1	61,100	53,300	43.7	38.2	1,897	1,876	845	826	100.0	18,400	16,100
California	98.8	441,100	443,100	49.7	49.9	13,393	13,649	95,568	98,451	100.0	39,600	34,900
Total	95.7	2,434,100	2,326,400	68.2	65.1	45,663	45,810	125,644	128,128	94.9	456,300	455,600
Texas (Gulf Coast)	100.0	429,700	405,600	81.2	76.6	6,863	6,612	6,629	6,654	98.5	95,100	96,000
La. (Gulf Coast)	100.0	111,300	114,400	78.8	77.6	2,056	2,155	1,502	1,407	100.0	23,900	18,000

Oil Bottle Limits May be Lifted At Meeting of State Sealers

WASHINGTON, May 18

A YEAR ago the twenty-third National Conference on Weights and Measures, held at the Bureau of Standards, voted that the oil industry's lubricating oil bottle should not have an over-all height or length exceeding 16.5 inches, should have a vent so as to facilitate its draining, and have a fill mark on its side. Much attention is to be devoted to that bottle at the forthcoming twenty-fourth annual conference, to be held on June 2 and the three following days.

The probabilities are that the committee on specifications and tolerances, in direct charge of the matter, will recommend that the length limit and the vent requirement be deleted from the specifications as to what a lubricating oil bottle should be.

Data gathered in the year that has elapsed since the adoption of the height or length limit and vent requirement, do not tend to support the ideas that caused the limit. The experiments conducted by the Bureau of Standards in the year tend to show that a bottle, even if it is longer than the 16.5 inch limit, will drain as readily as a shorter one, and that the presence or absence of a vent makes no perceptible difference in a vessel of that size, whether it be called a container or a measure.

The question whether a lubricating bottle is a measure or a container is also likely to be considered at much length. That is likely to be so whether the bottle is sealed or not sealed. In the earlier discussions it was held that if the bottle was sealed it was a container and therefore not subject to scrutiny by the sealers of weights and measures.

C. V. Beaton, manager, lubricating oil department of Shell Eastern Petroleum Products, Inc., and W. G. Clark, chief lubricating engineer, Pure Oil Co., will explain the methods of merchandising oil in sealed bottles followed by those companies. They will have an exhibit of their bottles and will give a demonstration with them.

On the second day Charles M. Fuller, city and county sealer of weights and measures of Los Angeles, will explain equipment devised by him for testing large capacity meters for the measurement of petroleum products.

A newcomer at the conference will be the Gasoline Pump Manufacturers Association. Ralph Heaton, executive secretary, will explain the organization and objects of the association.

S. O. Indiana Adds Two Executives to Board

CHICAGO, May 16

ROBERT E. WILSON, head of the development and patent department, and Louis L. Stephens, general counsel, were elected to the board of the Standard Oil Co. of Indiana May 11. The board was increased from 11 to 13 members by the election.

Since the recent reorganization of the company under the new Indiana corporation act the new charter provides a maximum board membership of 15.

Robert E. Wilson

Mr. Wilson joined the Indiana company in 1922 as assistant director of research. In 1929 he was made assistant to the vice president in charge of manufacturing in charge of the patent and development department. Last year his duties were enlarged to include general supervision of all research laboratories of the company.

During his service with the company Mr. Wilson has invented a number of new processes and products. He is the author of a large number of technical papers on problems of corrosion, Lubrication, motor, fuels and cracking. He is active in the American Chemical Society, the American Petroleum Institute and the American Institute of Chemical engineers. Mr. Stephens left the general practice of law in South Dakota in 1924 to join the Indiana company. Since then he has handled much of the cracking patent litigation.

Louis L. Stephens

Penalty Suits Filed Against Violators Of East Texas Proration

By Paul Wagner

N. P. N. STAFF WRITER

HOUSTON, May 15

PENALTY suits charging violation of state proration edicts and injunction proceedings to forestall enforcement of railroad commission orders came thick and fast in Texas courts this week.

Five suits charging violation of East Texas proration orders were filed on behalf of the railroad commission in Rusk and Gregg counties, the attorney general's department announced May 14.

Penalties of $1000 daily were asked in three suits against the British-American Syndicate; the Cranfill-Reynolds Oil Co., now controlled by the Moody-Seagraves interests; and the Pilot Oil Co., composed of Tom E. Cranfill, E. B. Germany and others of Dallas.

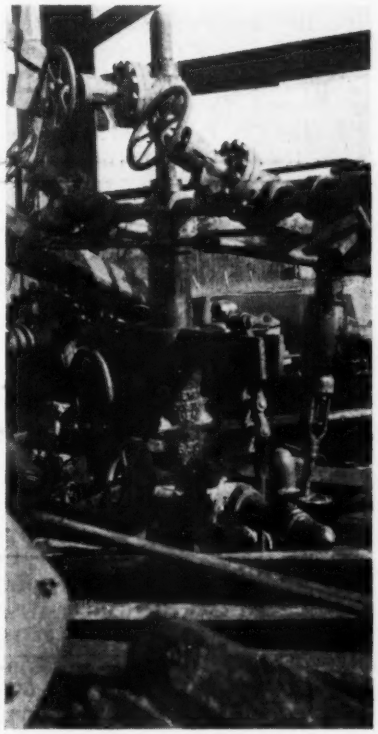
In two suits brought against Alfred MacMillan and the MacMillan Petroleum Corp., charges of waste were made. Earlier in the week, MacMillan and the corporation bearing his name had sought federal court injunction against proration, charging violation of state and federal laws by "illegal combination" in addition to attacking railroad commission authority.

Federal Judge Duval West declined to issue an order on the MacMillan petitions, at San Antonio, after a conference in chambers with legal representatives of petitioners and the attorney general's department. Instead, he asked the federal circuit court of appeals to hold a three-judge hearing on the subject.

Trial of the case will begin at Houston, May 21, before Federal Circuit Judge J. C. Hutcheson, Jr., and U. S. District Judges Duval West of San Antonio and Randolph Bryant of Sherman.

Because federal constitutional rights are involved, and three judges would have to rule on permanent injunction, this course was decided upon. MacMillan, individually and as trustee for the corporation, charges the proration law and its enforcement, interfere with the use of private property as guaranteed by the federal constitution.

MacMillan further charges that proration amounts to confiscation of property, as his company has both land development and oil sales obligations to meet. Contracts cited include 200,000 barrels of crude to be delivered in 60 days to Toronto Pipe Line Co.; 600 cars to James B. Berry & Son, within 90 days; 1500 barrels daily to Stanolind Crude Oil Purchasing Co.; and 1500 to 2000 barrels daily to the Sinclair interests.



Hook-up on Arkansas Fuel Oil Co., Moncrief & Farrell discovery well of Lathrop area, northwest of Longview, Gregg county, East Texas. From date of discovery, late in January, to March 21, the owners had taken 240,334 barrels from the Lathrop well and were exploiting it under pinched production practice at 5000 to 8000 barrels daily

Plaintiff set up that it had been marketing 15,000 barrels daily from two wells, against its contracts, but that May 1 proration had cut the MacMillan allowable under state orders to 1455 barrels daily.

Hearing on injunction proceedings brought by the Central Pipe Line Co., a short gathering system, operating in Rusk county, has been postponed until May 22 in Travis district court at Austin. Judge J. D. Moore overruled temporary injunction pleas and set the case for hearing on permanent ruling. The company pleaded it had contract to transport 15,000 barrels daily from one completed well on the property to which it is connected and that proration would reduce its allowable runs to 387 barrels daily.

Additional suits in state courts seeking injunctions against proration have been filed by Luling Oil & Gas Co., operating in the Kilgore area, Rusk county; and the Nat Hunter Producing Co., and the Nat Hunter Oil Co., operating in both Rusk and Gregg counties. The Hunter petitions set up that the companies have wells capable of producing 35,000 to 40,000 barrels daily and that proration abridges their rights.

The legislature, meantime, was going ahead with consideration of a bill offered by Representative Howsley and sponsored by substantial independent operators through the state

to strengthen proration powers of the railroad commission.

In addition to clarifying disputed points of state authority under conservation acts of the past, the new bill would require immediate hearings on injunction proceedings against proration and require petitioning operators to forfeit enough allowable production to make up for excess exploitation in any period of injunction.

The house oil, gas and mining committee voted out the measure favorably, but unless the legislative session is carried beyond the normal adjournment date of May 22 the bill appears doomed to die on the calendar.

Rules of parliamentary procedure apparently had won for the bill's opponents a fight they had unsuccessfully waged with oratory. House rules provide that for the first six of the last eight days of the session a bill can be placed before the house officially only on two-thirds majority vote. Opponents say proration advocates cannot muster the necessary votes.

Governor Sterling has issued a statement, however, saying he believes the legislature should stay in session another week after May 22 if unable to act finally on important measures before it.

"Unless the legislature passes these bills before it goes home," he said, "a special session may be necessary, notwithstanding I am averse to calling a special session."

With individual exceptions about the only opposition focussed against the Howsley bill has come from the East Texas Lease, Royalty & Producers Association and Sabine Uplift region operators responsible for injunction proceedings. Elsewhere in Texas, substantial operators, both large and small, have voiced their favor.

The Texas Bankers Association also indorsed the proposed law at its San Angelo convention, May 14, urging the legislature "to give serious consideration to such laws as are necessary, first, to enable the railroad commission to prevent the great and unnecessary waste of oil and gas; second, to strengthen conservation laws of the state; and, third, to speed court procedure with reference to suits contesting validity of railroad commission orders."

Public hearings will be held by the railroad commission, May 22, on new rules dealing specifically with methods of drilling and completing wells, aimed at protecting life and property. Proposed rules require the producing string of casing to be cemented by the pump and plug method and that blowout preventers be installed before pay formation is cored.

Operators are ordered to stop drills at safe levels above the water line shown to exist by geological data in the area under development; thus limiting the amount of pay that may be drilled. It is hoped thus to prevent undue encroachment of salt water in such areas as the Woodbine pay fields of East Texas.

An attack on operating methods of one company in the Rusk county development has been made by competing interests, who took their case to federal court at Sherman. There, on petition of the Federated Oil Co., composed of Wichita Falls interests, temporary injunction was issued preventing Sinclair Oil & Gas Co. from using air/gas lift on its W. W. Holland lease.

The case is based on the charge that air/gas lift practice is in violation of railroad commission orders, although the commisison was not itself responsible for bringing of the suit.

Proration Attack Made By Purchasing Unit

HOUSTON, May 16.—Validity of proration in East Texas was attacked by a second short line system from the Joiner area, Rusk county, to tank car loadings racks when the Inland Waterways Pipe Line Co., and associates, filed suit seeking to enjoin railroad commission interference with its operations.

Associated with the Inland Waterways company in the suit are Gibson & Johnson, Inc., of Fort Worth, and John F. Merrick of Wichita Falls.

An earlier suit attacking proration by a short gathering system, that of the Central Pipe Line Co., was previously set for hearing at Austin, May 22.

Suggests New Method Of Gauging Wells

TULSA, May 16.—A new plan for the determination of potentials in the East Texas area is suggested by F. P. Donohue, chief petroleum engineer of the Southern Crude Oil Purchasing Co., Fort Worth.

Under the present system potentials are determined by three-hour gauges through an 11/16-inch choke, all wells being tubed with 2½-inch tubing. It is thought that this method speeds the encroachment of water since the production rate of the wells is in excess of the allowable daily yield. It also allows a building up of pressures before potentials are taken thus giving a false record of its actual potential.

The plan suggested by Mr. Donohue carries the use of chokes further, advocating that three tests be made with different size chokes. The first potential to be taken through the size used in flowing the allowable production, the second through a choke 1/16-inch larger, and a third 1/16-inch smaller, all gauges to be of 24 hour duration. The production totals and the tubing head pressures obtained in these three tests could be plotted as three points on ordinary coordinate paper, using barrels per day as ordinates and tubing head pressures as abscissas. An extension of the line to the left will show the potential production of a well at zero pounds pressure at the tubing head.

The author of the plan admits that it is offered merely as a compromise between the present system, and the ideal method which should be based on bottom hole pressures, gas-oil ratios, etc. Fairly rapid calculations could be made with the method and it is claimed that many of the common abuses of present practice would be eliminated. It would also result in saving the expense of tanks needed for taking potentials under the usual system.

East Texas Production 100,000 Bbls. Above Proration Allowable

HOUSTON, May 16

THE posting of the Mid-Continent gravity scale of 43 to 67 cents for East Texas crude by The Texas Co., May 15, marked its entry into the Sabine Uplift producing region, where five major companies are now paying maximum crude prices.

As Sabine Uplift region crude averages above 39, A.P.I. gravity, the field price of the five companies approximates 65 cents a barrel for such pipeline runs as they make.

Sinclair Refining Co., which previously had made lower price purchases, posted the Mid-Continent schedule, May 12. The Gulf, Humble and Magnolia companies had uniformly paid the Mid-Continent schedule since their original entries into the district.

No figures are available to show what percentage of East Texas crude moves below the posted market, on contracts or sacrifice sales of small producers, through gathering line systems connected to railroad loading racks for tank car shipments. The average daily movement by tank car, however, still approximates 170,000 barrels, according to latest field reports.

Unofficial but reasonably accurate figures showed, May 16, that East Texas daily average production is still approximately 100,000 barrels above the proration allowable of 160,000 barrels fixed by the railroad commission.

Progress was noted, however, because of the failure to increase excess production over the previous weekly period, notwithstanding 76 additional wells in the producing column.

The general district now has 465 wells; 49 in the Longview, 212 in the Kilgore and 204 in the Joiner, or Henderson, areas. May 13 figures showed the Longview area producing 44,499 barrels compared with 52,250 barrels last week and proration allowable of 35,000 barrels; Kilgore area, 122,087 barrels, compared with 120,883 barrels last week and allotment of 60,000 barrels; Joiner area, 95,734 barrels, compared with 95,767 barrels last week and proration allowable of 65,000 barrels.

Entry of The Texas Co. into East Texas was coincident with finishing of an 8-inch pipeline lateral from Kilgore to Douglas connection with Shreveport-to-Port Arthur trunk system and completion of its first Rusk county well. The well, on the Mrs. Mae Blackwell farm, is estimated good for more than 10,000 barrels, initial open flow potential. The affiliated Texas Pipe Line Co. is looping parts of its system to permit handling up to 45,000 barrels daily, mostly in common carrier shipments.

Another trunk system to serve East Texas is announced by Sun Pipe Line Co., affiliated with Sun Oil Co., which in conjunction with the Yount-Lee interests of Beaumont will build from the Longview area south to the Gulf Coast. The 180-mile 10-inch line, for which pipe is expected to be received in two weeks, will terminate at tidewater facilities near Beaumont.

First encroachment of water inside field lines of the Joiner area was in Sinclair Oil & Gas Co.'s No. 1 Jarvis, Juan Vargas survey, Smith county, which made 7 per cent b. s. and w. with the well pinched to 60 barrels hourly. When completed April 27 the well flowed 230 barrels in one hour through 2½-inch tubing and later made 4820 barrels in 20 hours. Bottom of hole is 3320 feet below sea level and top of sand is minus 3310 feet.

The Sinclair well extended the Joiner area about two miles south of the Guy V. Lewis No. 1 S.S. Cooke completion, which previously had been the lone Smith county producer. Other Joiner district wells are in Rusk county, to the east.

In Rusk county, a mile and a half south extension of the Joiner area was made by La-Salle & Davenport's No. 1 Ida L. Kinney, averaging 70 barrels an hour the first two hours through three-quarter-inch tubing. It is on a 94-acre tract in the J. B. De Cadene survey, two and a half miles east and slightly north of the Sinclair No. 1 Kinney, which extended the area southwesterly a week ago.

In the western part of Gregg

Ray & DeMontrand well on the Birdwell farm, Joiner area, came in while breaking down drill pipe after setting liner. Picture shows oil flowing from under derrick floor at the beginning

county, Longview - Gladewater area, Sinclair Oil & Gas Co., May 13, brought under full control its No. 1 Cole well, which caught fire April 28 while flowing wild. The inferno, which cost nine lives of workers and cost approximately $300,000 to subdue, was quenched a week ago by shooting with nitro-glycerin, but the well continued to flow wild until this week.

East Texas small scale producers and gathering line operators will be authorized to pool resources in pipeline construction, if Governor Sterling signs a bill passed by both houses of the legislature. Although designed to benefit small operators, there is said to be nothing in the measure to prevent large companies co-operating in joint construction of pipelines. Under the bill, no permit would be necessary from the railroad commission to permit construction.

Urge Oklahoma Output Be Kept at 550,000

TULSA, May 16.—Recommendation that the Oklahoma City pool be recognized, for proration purposes, as four distinct "sources of supply" was made by the statewide proration committee of Oklahoma on May 13. Members present at the meeting were Chairman Alvin Richards, Pure Oil Co.; R. M. Young, Carter Oil Co.; Wirt Franklin, of the Wirt Franklin Petroleum Corp.; E. J. Nicklos, Continental Oil Co.; E. R. Filley, The Texas Co.; J. S. Sidwell, Prairie Oil & Gas Co., and Ray M. Collins, proration umpire.

The four distinct sources of supply recognized in the Oklahoma City pool are: The lime area, first to be developed; the lower Simpson sand area, which includes the so-called "school land sand," the "Lowery sand" and the "Johnson sand;" the North Wilcox pool and the South Wilcox pool.

"Differences in situation and condition of these various separate pools strongly indicate that the total market outlet for the Oklahoma City area should be divided up among them in a more equitable manner, the details of such a plan to be worked out by the Oklahoma City operators and be by them submitted to the Corporation Commission for inclusion in its next order if approved," reported the committee. "It being understood, however, that such a separation into distinct pools shall not work an increase in the aggregate allowable production from the entire Oklahoma City area."

The committee recommended that for the present there be no changes in the allowable production from the various pools or areas and the members were unanimous in the belief that for some time to come the demand for Oklahoma crude will not exceed 550,000 barrels per day.

Jacobi Now Buyer for Five Vacuum Subsidiaries

TULSA, May 16.—W. P. Jacobi who for several years has been manager of the petroleum purchasing division of the Wadhams Oil Co. of Milwaukee, has been named purchasing representative in the Mid-Continent of four additional Vacuum Oil Co. subsidiaries.

Purchases of crude oil and various petroleum products for the accounts of the White Star Refining Co., Detroit; Lubrite Refining Corp., St. Louis; Perfect Oil Corp., LaCrosse, Wisc., and the Barkhausen Oil Corp., Green Bay, Wisc., will be handled by Mr. Jacobi in the future.

Mr. Jacobi is one of the best known buyers in the Mid-Continent. For several years he represented the Wadhams Oil Co. with offices in Tulsa, later being transferred to Milwaukee.

W. P. Jacobi

About two years ago he was returned to Tulsa as manager of the purchasing division of the company which had grown considerably through the acquisition of the Bartles-McGuire Oil Co. After the acquisition by Vacuum of the Wadhams properties Mr. Jacobi was retained as buyer.

Cut Gasoline Plant Fuel Bills with Rich Gas

LOS ANGELES, May 15.—Approximately 100 members of the California Natural Gasoline Association attended the regular monthly meeting, held in Los Angeles, May 14 to hear a paper on "Some Aspects of Gasoline Plant Operation" as presented by N. C. Wells, of The Texas Co.

The paper dealt in detail with efficient design and operation of gas engines and compressors and the author gave some comparative data on two and four cycle engines. He indicated that use of a gas with a high B.t.u. value was often beneficial and effected a reduction in fuel consumption.

This was substantiated in the discussion that followed by another member, who attested that, on a particular installation, the fuel bill had been cut between 30 and 40 per cent by increasing the heat value of the gas. This result was obtained, however, only by proper adjustment of the air-gas mixture.

Some typical data were given on compressing California natural gas and the author included a discussion of several formulae. In an interpretation of indicator cards, the results of mechanical and operating imperfections, as shown on the card graphs, were discussed by the author.

In concluding, the paper touched upon design and operation of fractionating towers and absorption plants proper, with particular emphasis on low pressure installations as found in the Los Angeles Basin.

Gas Business Hampered by Low Price Of Fuel Oil and Coal

By Lawrence E. Smith

N. P. N. STAFF WRITER

MEMPHIS, Tenn., May 16

IF IT is any comfort to the oil men to know it, the gas men aren't very happy now, either. They are freed, it is true, from the intensive competition with each other that keeps the oil industry upset. Once they get a franchise they have all the business in their line, in most cities and towns, at least. Their rates are regulated by local or state governments, but that frequently is better than having them regulated by competition.

The gas business has made big strides the last few years, with long transmission lines laid or under construction, from territories where reserves are calculated to last for many years. With an assured supply, a certain form of control to protect the markets, why aren't the gas men happy?

The answer was given in a short talk by Ralph W. Gallagher, president, East Ohio Gas Co., Cleveland, at the opening session of the annual convention of the natural gas department, American Gas Association, held in Memphis, May 11-14. Mr. Gallagher said the trouble lay in the competition natural gas has from coal and fuel oil.

"Competitive fuels are selling in practically all sections of the country below production costs," said Mr. Gallagher. "Steam coals in industrial sections are selling as low as $2.50 per ton, delivered; heavy fuel oils from 60 cents to $1 per barrel, and light fuel oils from 2 to 4 cents per gallon, depending on location.

"In the last nine or 10 months, the selling price of competitive fuels has been reduced to approximately 50 per cent and to a level basically and uneconomically unsound. As a consequence we are having one of the most serious competitive fuel crises in the history of this country.

"It can mean but one thing. Our very existence depends upon our ability to meet this uneconomical competition. . . . . Fortunately, a great many uses to which natural gas is being put are not on a direct competitive basis. . . In many other operations where gas is being sold in large volumes, cruder fuels can be used with greater economy. . . .

"The necessity exists for reducing to the utmost all controllable expenses, as these items are the ones subject to immediate reduction."

Brief as it was, Mr. Gallagher's talk was a sort of keynote address, as he touched upon certain pertinent problems and conditions against which the gas industry must battle. One of the sources of expense which now looms as a major one, is taxes. This, he said, is usually classed as "uncontrollable," but he wondered whether it was altogether that. Later, the convention, by resolution, endorsed his remarks on taxes and urged companies to adopt the method he suggested.

"I SOMETIMES wonder if this point of view is not the assumption why it has become a fact," he said. It is certainly an important item in the operating cost and one that is not susceptible to immediate reduction for the reason that it has been put into the utilities operating cost by outsiders.

"When times are prosperous governments are most liberal in spending money for public improvements. It is sometimes needed and often not. Unfortunately, however, during the depression when every other business or individual must curtail the spending of money, public money is spent very often most wastefully and uneconomically and with little benefit to the general welfare.

"However, this condition does exist. Public spending has become altogether too heavy a burden on private business, which brings us right back to the same old question, 'What are we in private business doing about it?'

"I HESITATE to attempt any suggestions. However, speaking as tax collectors for a considerable portion of the money spent in public business, I suggest the query, 'Why should we not help to enlighten those from whom we indirectly collect taxes as to the seriousness of the situation?'

"Should we not try to teach consumers that taxes paid by the utility are not paid by the stockholders of the company, but by the consumers of the utilities' products? In other words, tell the consumers that when they pay their utilities bills, 10 per cent, or whatever is the proper amount, of the bill is a tax—an indirect tax.

"The harm that this form of taxation creates is that the utility consumer, not realizing that he is paying a tax, is little concerned in the way it is spent. It seems to me that if each consumer of a utility product were told, each time he pays for a thousand feet of gas, what portion of it is to be turned over to tax spending authorities, he will imediately become interested in trying to curtail the amount of money raised in this way. . . ."

There are signs that the natural gas men are getting ready

to take a hand in the conservation movement, which the oil men have wrestled with so long and earnestly. What turn the gas men will give the crusade is, as yet, uncertain, but a committee is busy gathering the facts on gas wastage in producing fields, both in the United States and Canada.

THE grievance of the gas men is this: Oil companies, some of them assert, are the principal offenders in wasting gas. In a "dry" gas field, where no oil is produced, the operations are handled, for the most part, in orderly fashion and with very little gas going into atmosphere.

Not so in many oil fields, even though they carry with the oil tremendous volumes of gas. The latter is dissipated into atmosphere, some of it processed in plants to recover the gasoline and the residue wasted. Almost incalculable reserves are being destroyed which some day, and that day not far distant in certain localities, will be needed as fuel.

Now, the gas companies are making tremendous investments in large gas lines whose worth depends entirely upon adequacy of reserves. If such gas fields as contain some oil are rendered worthless, then the effective life of the pipeline is shortened, more and more investment will be required to search out new gas fields. Such is the basis of the protest.

No formal action was taken at the meeting, but the hotel lobby was fairly filled with conversation on the subject. A sub-committee, headed by E. P. Hindes, chief geologist of Henry L. Doherty & Co., is collecting data on wastage, which will take in wastage in the oil fields as well as in the purely gas fields. The personnel of the committee is not completed, it was announced.

There is a main conservation committee of the association, in existence for more than a year. L .B. Denning, Lone Star Gas Co., Dallas, is chairman and Judge H. O. Caster, Cities Service Co., New York, is vice-chairman. A. F. Bridge, Los Angeles; John B. Corrin, Pittsburgh, and B. M. Nowery, Houston, are the other members.

Some of the gas men believe that oil men who are fighting for state laws to prohibit gas wastage in oil fields, have gone about it in a manner confusing to the legislators. Much emphasis has been put on the value of gas as the means of getting a larger, more complete recovery of oil from the sands.

Gas energy, contend the gas men, hasn't much meaning to the average member of the legislature. He understands better the subject of gas as a fuel, something on which taxes are paid and from which royalties are derived. The oil men will obtain the result they desire to reach if they insist upon the prohibition of physical waste of gas, leaving out of the discussion the matter of gas energy and its role in producing oil, it was suggested.

Specific instance of gas wastage was given by William Moeller, Jr., vice president, Southern California Gas Co., in his paper on the production of natural gas in California. Mr. Moeller said that the net daily production of gas in California in March was 1,160,000,000 cubic feet. Of this amount, said Mr. Moeller, 218,000,000 feet were used in the fields as fuel for producing and refining; 212,000,000 feet were absorbed in gasoline plant operations; 462,000,000 feet were sold to gas companies, and 252,000,000 feet were blown into the air—a loss of approximately one-fourth the total production.

Mr. Moeller gave some data on the gas storage plan as used in California. The storing of excess gas production in depleted sands has been used successfully in various parts of the United States. Several oil companies in California have followed the practice.

It was first started in that state in the Dominguez field May 1, 1928, and up to September, 1930, a total of 3,638,-028,000 feet had been stored at that point, Mr. Moeller said. The gas was carried from the Long Beach field by the lines of the gas companies, boosted to 250 pounds pressure by them at Dominguez and turned over to the oil companies for final compression to 750 pounds for injection into the sand.

"Another equally interesting storage program is the Standard Oil Co. and the Southern California Gas Co.'s co-operative storage program of injecting excess gas into the Buena Vista Hills dry gas zone," said Mr. Moeller.

Not only is excess gas from the Midway-Sunset field conserved, but during one summer, large volumes of gas were transported from the Ventura Avenue field, a distance of 137 miles, and stored. More recently Kettleman Hills and Midway-Sunset gas is being injected.

"UP UNTIL the present, the system in the Midway-Sunset field has been very simple, consisting of three injection gas wells connected to receive gas from 300 to 400 pounds from the main line compressor plant. The gas is first measured through a master storage meter into the delivery line to the wells, and then metered again at the wells.

Storage started May 4, 1928, and was continued intermittently with alternate periods of storage and withdrawal. The total injected to date is 4,161,-903,000 cubic feet, of which 1,-082,283,000 cubic feet were withdrawn, leaving a total in storage of 3,079,620 million cubic feet.

During this storage the injection pressures have increased from the initial of about 185 pounds to the present pressure of 300 pounds. The shut-in pressures at the time injection started was 115 pounds and at present is 245 pounds."

More than 700 registered for the four-days meeting. The annual election of officers was deferred. H. L. Montgomery, vice-chairman of the department, would have, under the customary procedure, become chairman. He is not in good health and preferred not to accept the place.

H. C. Cooper, who is in charge of the technical work for the Hope Natural Gas Co. and affiliated companies, at Pittsburgh, will continue as chairman until the annual meeting of the American Gas Association in September, when officers of the natural gas department will be elected.

ADVERTISING PAGES REMOVED

Waste Carefully Defined in New California Conservation Law

LOS ANGELES, May 15 WITH the governor's signature attached, California Senate Bills 362 and 363 will become laws within 30 to 60 days. In view of difficulties encountered in the enforcement of the state's gas conservation act of 1929, it is expected that various operators will seek to nullify the effects of these bills by dragging them through the courts.

Bill No. 362 was buffeted back and forth between the Senate and Assembly for over two months and with constant reference to the committee on oil industries it carried six amendments when finally passed.

Essentially, this act is proposed to prohibit and prevent waste of oil in California by the creation of an oil conservation commission which is to consist of six members, one of whom is to be the state oil and gas supervisor and one to be elected from each of five oil districts of the state.

Within 30 days after the act becomes effective, the five commissioners will be elected by ballot on a plurality vote of oil companies entitled to vote for district oil and gas commissioners, each company to have one vote.

Two of these commissioners will serve until the third Monday in September, 1933, two until the corresponding day in September of 1934 and one until 1935, and the successors of all members are to serve for terms of four years each.

The state oil and gas supervisor is to be ex officio secretary of the commission and will keep a record of its proceedings in his office, which shall be the office of the commission. Duties of the commission are outlined as those necessary to eliminate waste of crude oil and its affiliated products.

The commission will appoint deputies and employ legal, technical, clerical and other assistants.

It is considered likely that the commission will appoint the present California oil umpires as their assistants in enforcing this law, in which event the set up would not change materially from that now being used, except that proration would be an enforced rather than a voluntary measure.

If the commission finds that waste is being committed incident to the wasteful overproduction of crude petroleum it has the power to issue an order fixing the amount of non-wasteful production for the state. The allowable production is to be distributed among wells and fields in the state in a manner similar to that used by the umpires.

The commission will take into consideration the extent of the respective fields, zones or properties, the relative accessability of oil reserves at the time of allocation, the stage of development of the wells, the size and condition of the wells, the quality of the oil produced from each field or zone, and the demand for this oil.

The state director of natural resources is made a virtual dictator in the local industry by virtue of the fact that no order made upon the findings of the commission that wasteful production exists, shall become effective until it has been approved by the director.

IF THE director objects to an order, the commission must reconsider it and after making such amendments as are indicated must resubmit it again for the director's approval. Should the director fail to either certify his approval or objection to an order within 15 days it shall be considered approved.

To discourage legal steps to thwart the act, and to nullify any advantages to be gained by such action, the law provides that any producer operating his wells during court procedure will be forced to shut them in entirely when the decision is handed down until the amount of production over that allowed by the court is made up.

"Waste" is defined to include underground waste or destruction without beneficial use, surface waste, waste by reduction of the total quantity of recoverable crude petroleum in any underground source or supply by the careless or improper drilling or operation of wells, and the waste incident to or resulting from the production of crude petroleum when the current production together with the amount of oil in storage exceeds current demands.

IT PLEDGES a continuity of an adequate supply of crude oil and refined products for current requirements. The requirements to be determined upon the basis of past experience, existing conditions, and estimated future requirements of oil for local, domestic use and shipment.

The loss by evaporation, or leakage and the increased hazard or loss from fire and other causes resulting from the storage of oil or its refined products in excess of the quantities that are reasonably necessary to insure an adequate supply for current requirements, is waste within the meaning of this act.

Lawyers are already reported busy seeking legal loopholes in this act and it is considered likely that it will have to wend its weary way through a maze of litigation.

Although a majority of the California operators favor the new act, it is considered unfortunate by many that it was found necessary to invoke political aid because of the fact

that so few men outside of actual operations and accessible to act as commissioners are capable of comprehending the many problems now confronting the industry. However, it is conceded this emergency act is necessary under existing circumstances.

Senate Bill 363 also passed by the state legislature and signed by the governor, on the surface, was proposed as an act to protect persons and property against danger from fire and explosives in petroleum oil or gas wells by providing for the location of wells in relation to the outer boundary lines of the property, public street, roads and highways and other wells.

Wells under this act will be declared a public nuisance if located within 100 feet of an outer boundry of the parcel of land, or public street, dedicated prior to the commencement of the well, or within 150 feet of any well being drilled or within 150 feet of any well producing or capable of producting oil or gas.

Several contiguous parcels of land in one or different ownerships may be operated as a single petroleum oil or gas lease and the term "outer boundry" in this case means the outer boundary line of the lands included in the unit.

If a parcel of land contains one acre or more, but is less than 250 feet in width, then not more than one well may be drilled on each acre of the area and this one must be placed as far from the lateral boundaries as the configuration of the surface and the existing improvements will permit. The provisions of this act do not apply to any field producting on the date it becomes effective.

Suggests Kansas Stay Out

TOPEKA, Kans., May 16.—Thurman Hill, member of the state public service commission, in a report to Gov. H. H. Woodring on the proposed interstate agreement to regulate the oil industry through adoption of uniform laws. has recommended that Kansas keep out of the agreement until some definite plan is proposed to protect the domestic industry from foreign oil. The tentative draft of the agreement, he says, ignores the foreign question.

Harry M. Runkle

Ideco in Merger With Stacey Interests

COLUMBUS, May 16.—The International Derrick & Equipment Co. and the Stacey Engineering Co. have been merged to form the International-Stacey Corp., one of the largest companies of its kind in the world. General offices will be at Columbus.

Harry M. Runkle, formerly president of the International Derrick & Equipment Co., was named president and general manager of the new company. Col. Carmi A. Thompson of Cleveland, former Stacey president, was made chairman of the board.

Various companies making up the merged combine will continue as divisions of the new corporation. International Derrick & Equipment Co. of Columbus, for example, will be the IDECO division. It will continue in the manufacture of steel derricks, well drilling equipment, steel buildings, airway equipment, etc. It has three plants in Ohio, one in Texas and one in California.

The Stacey company formerly was a holding company operating a number of companies including the Connersville Blower Co., P. H. & F. M. Roots Co., Wilbraham-Green Co. and the Stacey Brothers Gas Construction Co. and the Stacey Manufacturing Co. The various companies manufacture gas holders, tanks, stacks, purifiers, blowers, exhausters, meters and other gas, oil and water equipment.

Wayne B. Stacey, former vice-president of the Stacey Engineering Co. will continue in charge of the Stacey division as executive vice-president of the new company. J. S. Tatman will continue in active charge of the Roots-Connersville Wilbraham division.

Convert Oil Line to Gas

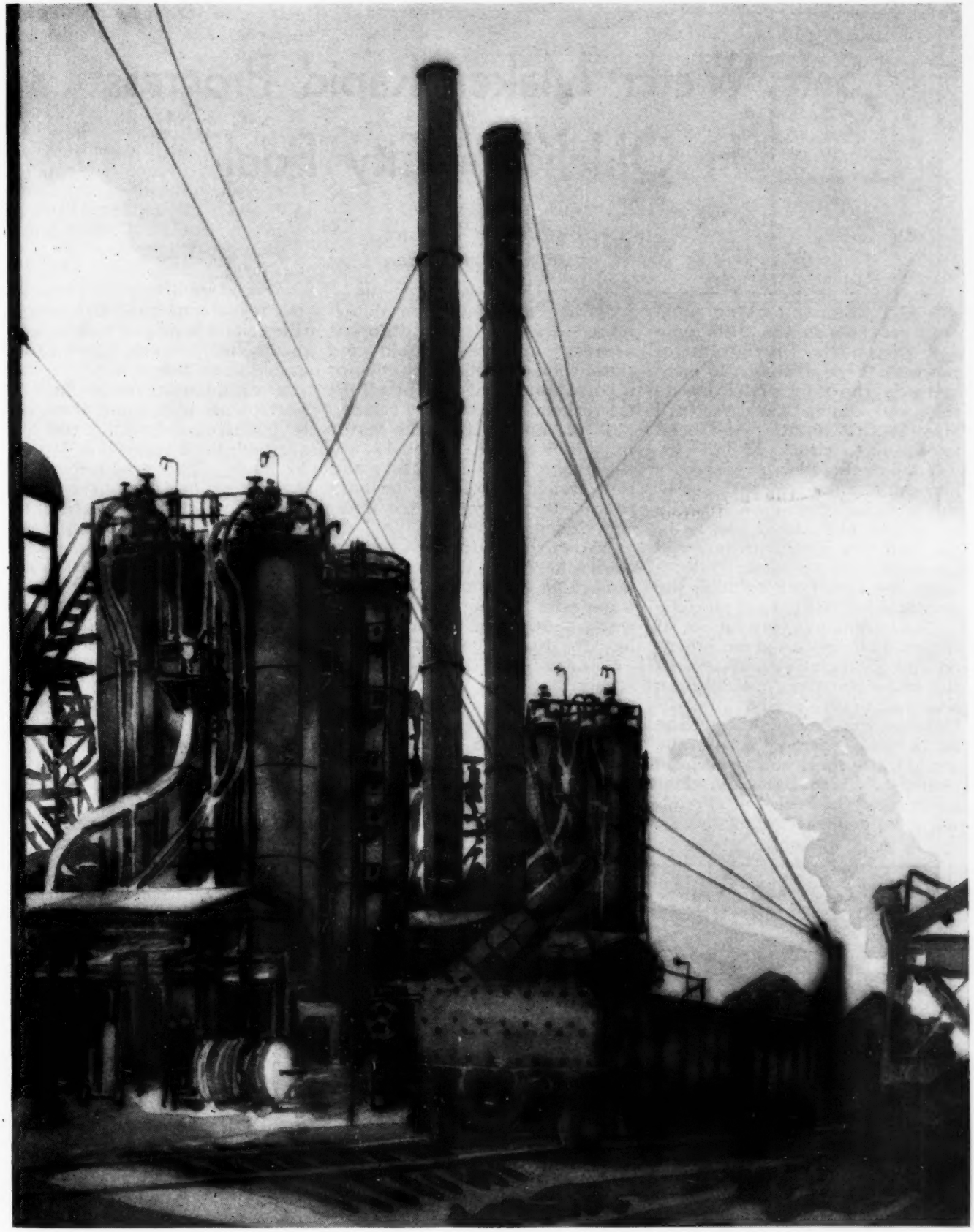
TULSA, May 16.—The Stanolind Pipe Line Co. has leased to the North Central Gas Co. a portion of its oil line from Teapot Dome to Freeman, Mo. The line will be emptied of oil and used for transporting gas to a number of towns in eastern Wyoming and western Nebraska. The North Central company is affiliated with the New York Oil Co., a pioneer gas producing and distributing company at Casper.

Gov. Murray Attacks Gas Companies

TULSA, May 16.—Marking another step in the controversy over gas rates to consumers, suit was filed Friday in the supreme court of Oklahoma against eight public utility companies asking forfeiture of their properties, confiscation by the state and an injunction to prevent their continuing to operate.

The suit was brought by Leon Hirsch, attorney, who is under contract with Gov. W. H. Murray to prosecute the action for a fee of $10,000 win or lose.

The Oklahoma Natural Gas Co. is the largest of the companies named in the suit. The move is regarded as part of the attempt of the state corporation commission to compel a reduction in rates. Such an order, calling for a 20 per cent cut, was issued early in the year but was enjoined by federal court until full hearing could be held.



FLAT contract price for cracking units constructed to licensor's design for licensee's account.

ARTHUR G. McKEE & COMPANY

Engineers and Contractors 2422 Euclid Avenue, Cleveland

120 Broadway, New York ❖ Bush, House Aldwych, W. C. 2, London

Associated with

PETROLEUM ENGINEERING, Inc. Tulsa, Oklahoma · Dallas, Texas

The WHESSOE FOUNDRY & ENGINEERING Co., Ltd. Darlington, England · 25 Victoria St., S. W. 1, London

Salt Water Makes Rapid Progress In Oklahoma City Pool

By William F. Lowe

N. P. N. STAFF WRITER

SALT water is making rapid progress in the Oklahoma City pool. On the first of the year there were but 19 sand wells in the intermediate zone that had shown water, but on May 12 this number had been increased to a total of 68.

Though this figure represents but slightly over 15 per cent of the total number of wells in the zone, the increase of nearly 11 per cent in a period of four and one-half months clearly indicates the speed with which the encroachment is taking place.

The accompanying map of the pool shows the areas affected and the relative positions of the water lines at the beginning and end of the period. It will be noted that the advance at the north end of the pool is from the west, while the wet areas in the central and southern portions seem to be the result of spreading local concentrations.

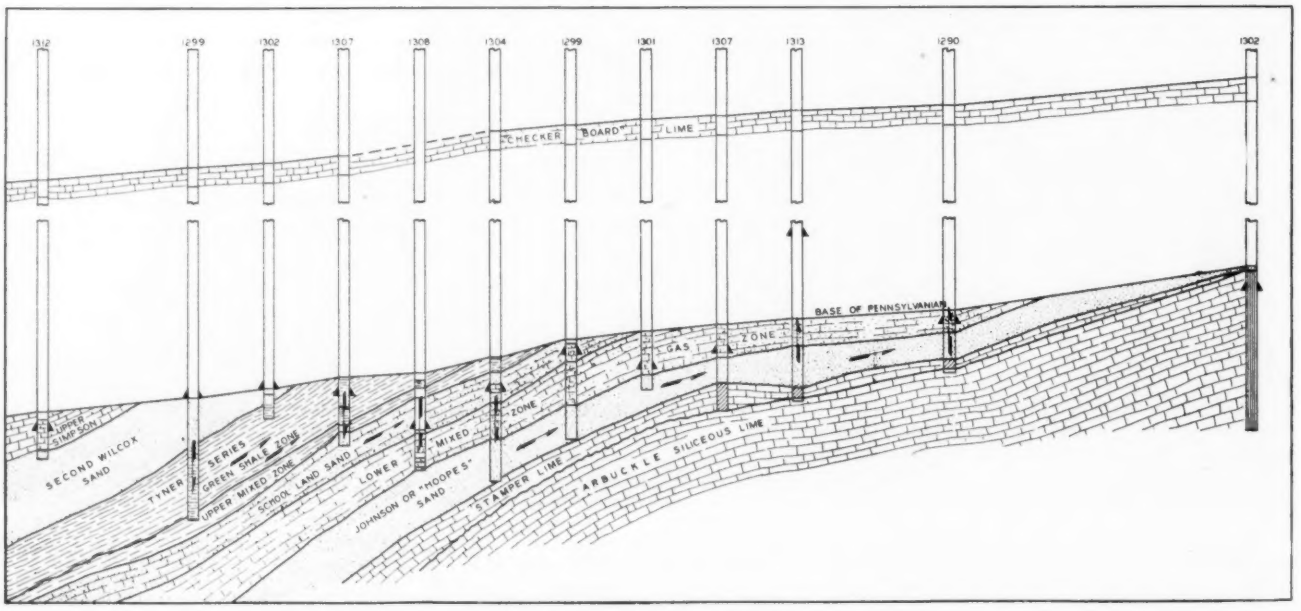
It has not yet been determined whether two different sources are responsible for these areas, or whether they are a combination of two possibilities, though it seem reasonable to suppose that the water lines in Secs.1, 2, 11 and 12, are the result of edge water, and that the lower closed contours represent a possible combination of sources.

The north-south cross-section shown herewith illustrates in a general way one of the explanations offered to account for the water showing on the south end, and for the large spot in Secs. 13 and 14. A general understanding of the characteristics of the horizons shown is necessary, however, before the possibilities indicated by the arrows become logical conclusions. Something of the drilling history and production methods is also essential.

The core of the structure is the Arbuckle or siliceous lime, a dense to coarsely crystalline gray-brown limestone. Oil and gas production found in this horizon occur in zones from 200 to 500 feet below the top and vary in thickness from two to 10 feet. The productivity of these zones has been over a wide range though the wells generally were large producers initially and many of them have had excellent recoveries.

At the present time, however, all are showing water in amounts varying from 10 to 100 per cent, and several are on the point of being abandoned. One of the chief characteristics of production in this formation has been that it early goes to water, and the present instance is no exception.

Within four months of its completion, the discovery well of the field began to produce



Cross-section of the Oklahoma City pool from the lime area south, showing the divisions of the intermediate zone and mode of casing used in many of the wells. It will be noted that most of the wells show open hole through several horizons thus permitting movement of oil, gas and water between formations. This practice is now being blamed for much of the water incursion in the intermediate zone. Casing points are shown by black triangles on the sides of each bore hole

water from this horizon. Considering the fact that the line area was the first to be developed, it is only natural that the pressure in the heart of the pool should have been greatly reduced at an early date.

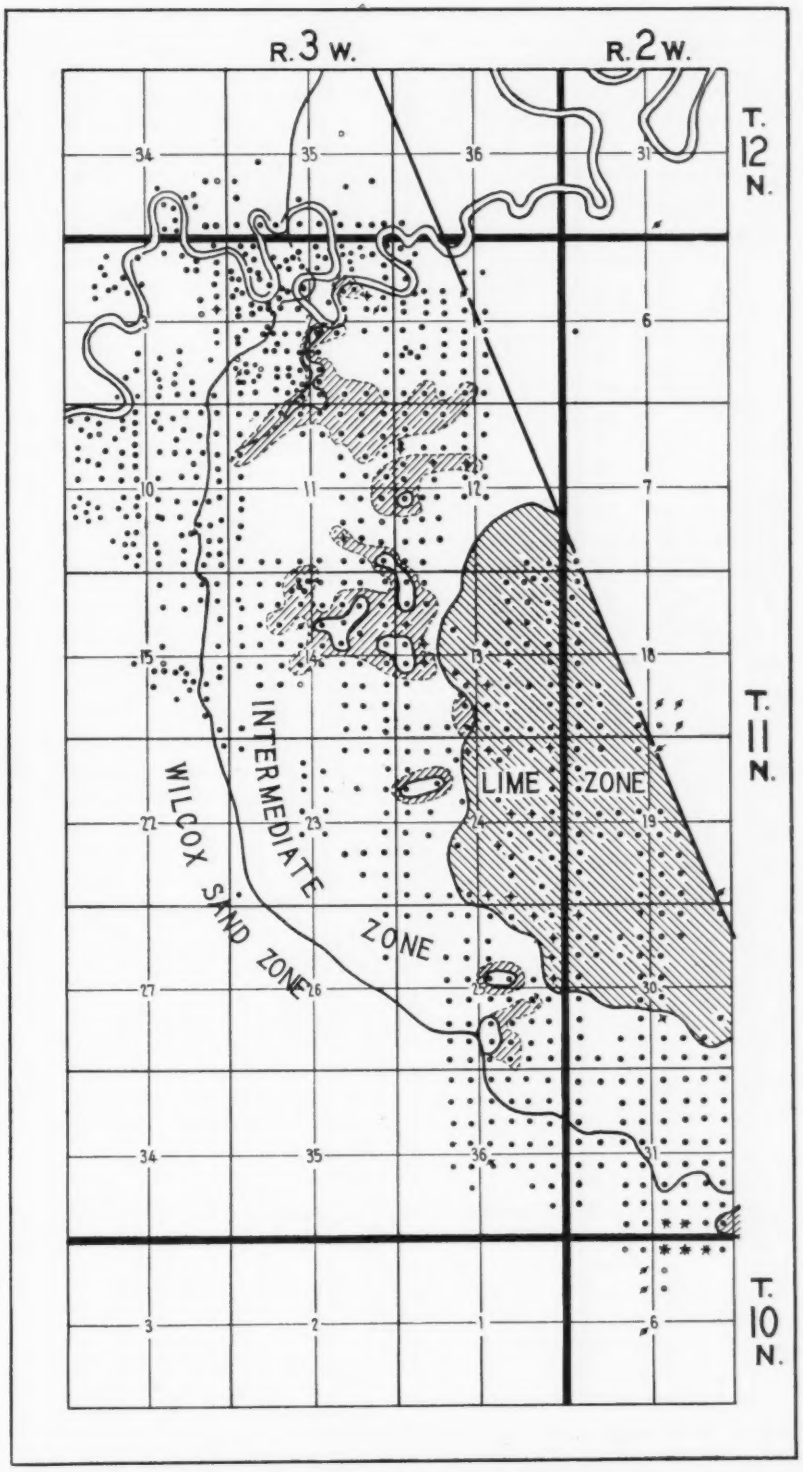
The Stamper lime, which immediately overlies the Arbuckle, is a porous body with a greatly varying thickness. In some wells it is entirely missing, while in others as much as 40 feet have been logged. It originally contained large volumes of gas, but the major portion of this has been withdrawn and, with a greatly diminished pressure, water has taken much of the space formerly occupied by the gas.

The Johnson or "Hoopes" sand is one of the most prolific producers in the intermediate sand zone. It is a poorly assorted, medium to coarse-grained, dolomitic sand with a porosity varying from seven to 28 per cent, and an average thickness over the whole structure of approximately 50 feet. Wells bottomed in this sand have yielded initials of 30,000 barrels daily and a number of gas wells of 150,000,000 cubic feet daily capacity also produced from this horizon.

Many of the latter were gasoline wells but none of these blew into oil as was originally thought possible. Enormous quantities of gas were withdrawn in the production of these wells, as well as from the oil producers, most of the latter having high gas-oil ratios. The result of this great gas production was a rapid dissipation of the formation pressure, in places as much as 75 per cent, and causing this horizon to be the largest water producer of the intermediate sand zone.

Between this formation and the "School Land" sand is a mixed zone composed of sandy dolomite with breaks of grayish green shale. Some production has been found in it though it is considered more of a gas sand than an oil producer.

The "School Land" sand is an irregular body of dolomitic sand with a comparatively low porosity ranging from eight to 15 per cent. Its average thickness is about 40 feet. Many of the producers in this sand have been the equal of those of the Johnson sand as far as initials are concerned, though the ultimate yield of the sand will be considerably less.



Map of the Oklahoma City pool showing the areas affected by water. In the intermediate zone the wells outlined by the solid contour lines mark the extent of water showing on the first of the year. The cross-hatched areas between these lines and the dotted lines shows the spread of the salt water as of May 12. A large portion of the change has come within the last 60 days

An upper mixed zone and a green shale zone, together having a total thickness of approximately 180 feet, separates the "School Land" sand from the Wilcox. The former is similar to the lower mixed horizon with a trace of oil and some gas. The latter has no oil except in a dolomitic sand body about 50 feet below the Wilcox, though the amount found is negligible.

The Wilcox sand, the characteristics of which are so well known, is the thickest of all the horizons and is the most consistent producer. There are but

two wells in this sand that have shown water and these are on the sharp dip of the structure at the south end of the pool. Pressures generally in the Wilcox sand are not greatly reduced from their original high of 2200 pounds and the oil already taken out is estimated as not exceeding two per cent of the ultimate recovery. It may then be considered as comparatively virgin territory if production methods are based on sound engineering and take advantage of the known sub-surface conditions.

THE cross-section shows how a number of the earlier wells were cased, before the underground conditions were thoroughly understood. It will be noted that there are eight different ways that the drill holes could penetrate the pay horizons, that is, there are eight different combinations that may be tapped.

Very few wells in the intermediate zone, which takes in all the sands between the Stamper lime and the Wilcox sand, are open to but one horizon. A glance at the casing points shown on the few wells given will emphasize this fact. Most of the wells drilled in this zone were cased on the first sand encountered and the rest of the hole left open, even though the bit penetrated as high as four other sands.

Considering the character of the formations that make up the intermediate zone, such a procedure was bound to have serious effects. It must also be remembered that the development of the pool began in the center and spread out to the sides. As a result of this practice it is thought that there has been a considerable movement of oil, gas and water between formations and that the present water problems are largely due to this movement.

With the production taken so rapidly from the Arbuckle and Stamper limes, in the early days before proration was put into effect in the field, the center of the pool went to water quickly and the pressure was reduced below the flow stage in a comparatively short time. As drilling proceeded down structure, and holes were left open through several horizons, gas was taken from the dry sands. As there pressure was reduced they are thought to have absorbed no little amount of oil from the pay sands, thus robbing the wells of production that will never be recovered.

The more porous sands containing oil, such as the Johnson sand, could in this manner have lost pressure as well as oil when the wells were shut in during proration periods. Most of the gas sands in the intermediate zone are dolomitic and tight and would permit the escape of gas much more readily than the incursion of water, since the advance of the latter would of necessity be irregular. The higher pressures, however, due to the progress of development, have all been on the side of the structure and the movement has been toward the center, in some cases forcing water, and in others oil, into the adjoining sands. This water, though moving slowly, has entered wells that otherwise would not now be cutting.

It is also possible that water from the Arbuckle is responsible for the wet spots in the central and south portions of the intermediate area, having been drawn into the sands by the lowered pressure in them. If this is true, it is quite likely that large quantities of oil that under other conditions might have been recovered have been isolated and lost.

MANY of the wells bottomed in this horizon that have passed through some of the upper pays to reach it, have been plugged back in an effort to stop the water, but not all of these efforts have been successful. Much of the damage had already been done.

Another source from which the intermediate zone water may have come is from the faulted area. The forces which caused the great throw shown on the east side of the pool must also have caused transverse faults at other points in the structure. These must have been on a considerably smaller scale, but they could also be avenues for the passage of water from one formation to another.

It is thought that the encroachment on the north end of the pool where the dip is gentle, is more like edge water, and is considered a product of the "Hoopes" sand. The temperatures are high and the spread is from the west and up structure with a speed that is often surprising. Though the flow periods for the wells are not long and are widely spaced under the present proration system, water has moved up structure nearly a mile in from four to six producing days.

Such an advance does not mean that production in the area will be wiped out, though certainly some leases will be greatly reduced in value. Others may profit temporarily, but so rapid a spread, unless protective measures are taken at once, means that production is going to cost more to get from that time on.

IT IS doubtful if there will be any further drilling in the intermediate zone though there still remains within its borders many open locations. Lowered pressures and water have already reduced some of the wells to head flowing and some are completely dead. Various estimates of the zone indicate that it is about 45 per cent depleted at the present time, and though certain casing corrections are rapidly being made by several of the operators, the area seems to be well over the hill.

The current recommendation of the state proration committee for individual treatment of the various producing zones within the Oklahoma City pool, rather than a blanket prescription for the field as a whole, is a move in the right direction. It is certainly obvious that some such regulation is necessary, providing it is accompanied by group plugging back and recasing operations.

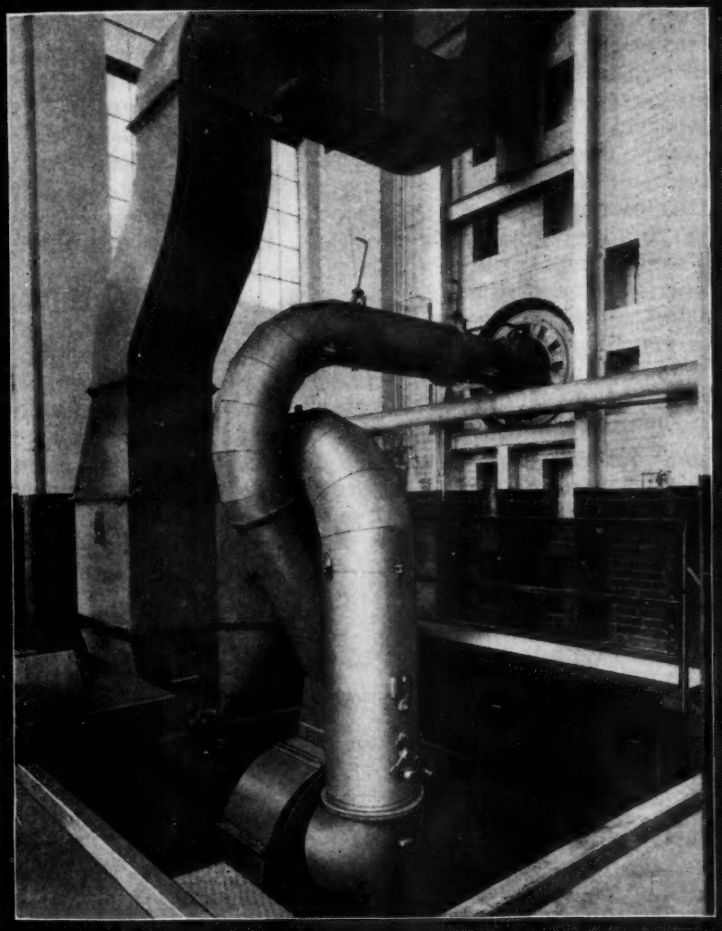
Walworth Co., Statler Bldg., Boston, has appointed F. H. Morehead, chief engineer, to engineering vice president. Mr. Morehead is a graduate of the University of Missouri, and has been with the American Steel & Wire Co., Kewanee Private Utilities Co. and the Western Tube Co. In 1921 he was made manager of the Walworth company's Boston works and later chief engineer.

The Standard Oil Company

(An Ohio Corporation)

CONTINUES TO KEEP ABREAST OF MODERNIZATION IN ITS STEAM GENERATING PLANTS, INSTALLING

ANOTHER UNIPULVO



in the Latonia Refining Corporation's new boiler room at Latonia, Kentucky. Following so closely upon their initial installation at the Toledo, Ohio, refinery, this second unit would indicate that the first had fulfilled all expectations of this discriminating purchaser. UNIPULVO guarantees are made, not only with the INTENT TO FULFILL them, but with knowledge that THEY WILL BE FULFILLED—or no payment will be demanded.

UNIPULVO UNIT PULVERIZERS HAVE WON THEIR WAY SOLELY ON THEIR MERITS!

THE STRONG-SCOTT MFG. CO.

Minneapolis, Minnesota

Superior Oil Co. Completes Second Fee Land Gusher in Kettleman Hills

By Jack N. Westsmith

N. P. N. STAFF WRITER

LOS ANGELES, May 15 WITH an increasing crude oil production total from the state, California operators are watching with considerable trepidation the development of uncontrolled fee-acreage in the prolific Kettleman Hills pool.

There is approximately 1000 acres of free-lance land within the probable productive limits of the north dome that can disturb the plan of orderly development entered into by the Kettleman North Dome Association and Standard of California.

Completion of another fee-land gusher in this area the past week raised the field's actual daily production above the 53,000-barrel mark and also increased the estimated potential production of 11 wells to approximately 90,000 barrels per day.

With a total of 21 active drilling wells on the north dome, including eight by the Association and six by Standard, it is estimated that by August the field will have a potential of nearly 280,000 barrels. On the basis of this figure, experts say, that the lower gravity oil found in the deeper Ochsner zone makes it possible for Kettleman crude to furnish California's petroleum markets to the detriment of other producing areas within the state.

Following closely upon the completion of Standard's 7Q-21, a week ago, Superior Oil Co. completed Huffman 2, Sec. 29, 21-17 on the northwest plunge of the Kettleman structure, for a daily output estimated at 10,150 barrels of 36.2 gravity oil.

Huffman 1, completed on the same section, is now producing in excess of 11,000 barrels per day, and with the new completion gives Superior over 21,000 barrels of oil or nearly twice the output of any other company or association in the field. Huffman 2 is located nearly 100 yards east of No. 1 and is higher on the structure.

Bottomed at 8320 feet, the latest addition to the field's list of producers, has a string of 9⅝-inch pipe cemented at 6990 feet with a string of 7-inch liner cemented through perforations at 7316 feet. Striking the Temblor oil sand at 7015 feet, the well has an over-all penetration of slightly more than 1300 feet.

Under two 25/64-inch beans the well was flowing at the rate of 3950 barrels per day with tubing and casing pressures 800 and 1400 pounds respectively. Gas production, under these conditions, was estimated at 2,740,000 cubic feet per day to give an oil-gas ratio of about 700 cubic feet per barrel of oil.

This is considerably less than the ratio of 10,000 to 1 allowed by the state under the nearly defunct gas conservation law. Gasoline extraction was reported as 2.71 gallons per thousand cubic feet.

WITH three wells of the Kettleman North Dome Association drilling in the oil sand and expected on production within a few weeks, definite preparations are being made to kill the Milham discovery well and its offset, Continental Oil Co.'s 12-8. Standard has two offsets to the discovery that are scheduled to be killed within the near future. All of these wells are bottomed in the gaseous upper zone and even under shut-in conditions are producing between 30 and 40 thousand cubic feet of gas per barrel of oil.

Both the Milham and Continental wells have 1500-pound fittings instead of the new 5000-pound heavy duty equipment now installed on Kettleman Hills wells. This factor, together with the fact that neither hole contains tubing is expected to complicate the problem of killing the wells without hazard to life or property.

OF the eight active drilling wells controlled by the Association, there are three bottomed at critical depths in the oil sand. Well No. 27-34J, Sec. 34, 2117 is below 8000 feet and has a penetration of the Temblor oil zone of about 1310 feet. In Sec. 1, 22-17, formerly operated by Pacific Western Oil Co., well No. 2-1P is drilling at 8335 feet with a penetration of 1560 feet, and well No. 41-2P, Sec. 2, 22-17 is drilling at 7845 feet with 1560 feet of penetration in the Temblor oil zone. The last two wells have penetrated the productive sands farther than any other project in the area and even more important, they are still coring oil sand.

On a separate gauge of Petroleum Securities Co.'s Felix 1, Sec. 35, 21-17,—also fee land—the rate of flow was estimated at 11,100 barrels of 32.9 gravity oil and 59,946,000 cubic feet of gas per day. The gas-oil ratio of 5400, while very good, is not as satisfactory as that of 2000 obtained in Felix 2 and is thought to be due to the inclusion of a greater portion of the upper gas zone.

Standard Oil Co.'s completion of a week ago, well No. 7Q-21, was reported flowing at a rate of 6995 barrels of 36.9 gravity oil and approximately 4,500,000 cubic feet of gas. The well is on two 65/64-inch beans and has tubing and casing pressures of

350 and 1175 pounds, respectively.

Deep drilling records were smashed to bits the past week by a crew on well No. Hobson A-2 of the Chanslor-Canfield Midway Oil Co. in the Ventura district. Bottomed at 10,010 feet, the project is to be drilled at least another 50 feet and then if showings do not improve the hole will be plugged back to test streaks of oil sand cored on the way down.

Hubson A-2 was started in the summer of 1929 to search for an extension of the Ventura Avenue structure, recently proven productive to a depth of over 8600 feet by Associated Oil Co. It was completed late last year at 7479 feet for a small flow of oil, estimated at 28 gravity, but was later killed to deepen after heavy duty equipment had been installed.

Electrically-driven equipment used on this test has proven entirely feasible and with a 4¾-inch bit on a 2½-inch drill pipe the crew has been able to proceed with a minimum of mechanical difficulties. It takes between 10 and 12 hours to go in and condition the hole and about 9 hours to come out.

Although the possibility of making a commercial producer out of this deep test appears rather dubious, recent reports indicate a good gas pressure and company engineers say they will continue drilling as long as there is a chance of finding an extension of the Ventura Avenue structure, recently found productive by Associated Oil Co. below 8600 feet.

Langston and Strahan Head National Oil Scouts

DALLAS, May 14

JOHN H. LANGSTON of the Sun Oil Co., Dallas, was elected president and C. A. Strahan of the Atlantic Oil Producing Co., Shreveport, chairman of the executive committee, at the May 12 closing session of the National Oil Scouts of America annual convention.

Mr. Langston, who is chief scout of the Sun, succeeded J. V. Adams of the Humble Oil & Refining Co., San Antonio, in the presidency. He has been active in the scout organization since its formation at Mineral Wells, eight years ago, and for several terms served the association as its secretary-treasurer.

As chairman of the executive committee, Mr. Strahan will have charge of issuing a historical volume on southwestern oil development, data for which is now being assembled. In association with Walter Wise of the Producers & Refiners Corp., at Eastland, editor-in-chief of the bulletin, Mr. Strahan has been responsible for collecting much of the data now already assembled. Mr. Strahan succeeds Earl Whitcomb of the California Co.'s land department at Midland as executive committee chairman.

Tom H. Terry, veteran southwest Texas scout of The Texas Co., now of Seguin, was elected first vice president succeeding Mr. Langston. L. S. McGee of Humble Oil & Refining Co., Houston, formerly of San Antonio, succeeded G. C. Phillips of the California Co., at San Angelo, as second vice president.

J. W. (Red) Selby, chief scout of the Shell Petroleum Co., at Dallas central division headquarters, was elected secretary-treasurer. He succeeded J. E. Beall of the Gulf Production Co., San Antonio.

Principal business before the association was action furthering its program for issuance of the historical bulletin mentioned, together with plans for putting out supplemental data each year.

Robert R. Penn, vice president for production of the American Petroleum Institute and chairman of the Central Proration Committee of Texas, addressed the group briefly on economic problems and curtailment measure of the industry.

Mr. Penn estimated economic losses to the industry would reach $350,000,000 in the next 10 years if flush crude continues to reach the market at 40 cents a barrel below posted prices of major companies, as now witnessed in East Texas.

Qualifying his statement, Mr. Penn said that under similar conditions elsewhere the same result might have been expected; therefore, his remarks were not to be construed as sectional.

Don Mathes of Dallas, with a score of 84, won this year's competition for the J. Edgar Pew cup in the annual golf play. He also won a set of golf clubs. L. S. McGee of Houston, last year's cup winner, was second and E. L. Wilson of Dallas was third. K. D. Harrison of San Angelo and Ferris Heffington of Kaufman were first and second scores among associates members playing.

Officers of the National Oil Scouts of America. Left to right, C. A. Strahan, Shreveport; Tom H. Terry, Seguin, Tex.; John H. Langston, Dallas; L. S. McGee, Houston; and J. W. Selby, Dallas

New Long Distance Gas Lines Will Increase Natural Gasoline Supply

By W. E. Reardon*

(Presented before Natural Gasoline Association of America, Tulsa, May 19-21)

THE continued expansion of the natural gas industry and directly the completion of new transporting systems were large factors in causing the record consumption during the past two years, with likewise increased production of natural gasoline extracted from natural gas delivered to pipelines.

Natural gas has been used in this country for more than a century, but recently it has attained a prominence far in excess to anything known in its earlier history. We may consider that we are now entering into our real era in the utilization of our natural gas resources. In this country, we are accustomed to mammoth achievements and, no doubt, are inclined to accept casually the noteworthy technical and economic advances that have resulted from the expansion of natural gas distribution. During the last few years, there have been lines constructed for the transmission of natural gas from a distance ranging from 100 to more than 1000 miles from the source of supply.

It is estimated that approximately 85,000 miles of natural gas trunk pipelines are now in operation in the United States, exclusive of gathering lines and local distributing facilities.

The future of natural gas is a question of interest to the industry. Present indications point to further consolidations and to physical interconnections of existing pipeline systems until many of the major gas fields will be available to a large percentage of the natural gas markets.

Mixing of natural gas with manufactured or coke oven gas will become a more or less general practice. A further increase in the consumption of gas for both domestic and industrial purposes is anticipated and new gas fields of importance shall probably be discovered from time to time. Some of these may be so located with reference to the great fuel consuming centers of the country that extensive markets hitherto not served by natural gas may be opened to the industry.

The Texas Panhandle gas field is the largest known single gas field in the world. In addition, other important gas fields have been developed in California and in the vicinity of Calgary, Canada. There are now several prospective gas fields that are interesting to the natural gas industry, because of their location to a great industrial and domestic gas market. They are located, principally, in Tioga and Bradford Counties, Pennsylvania, and an area in New York State north of these counties.

We may expect a material increase in natural gasoline production within the immediate future from gasoline plants treating gas supplied to large transporting lines now under construction. Among the gas pipelines now under construction, the three most outstanding are:

FIRST: Line from the Texas Panhandle field to Chicago, being built by the Continental Construction Corp. This line will be 24 inches in diameter, 925 miles long, designed for 800 pounds maximum pressure, and is to have a capacity of 200 million cubic feet of gas per day. The company distributing gas from this line has been granted permission to change its rate structure from one based on a given volume of gas of a fixed thermal content to the very sensible basis of thermal value alone; thus, instead of charging for so many cubic feet of gas—say, 525 B.t.u. per cubic foot—charges shall henceforth be made for the number of therms supplied, which will allow a certain flexibility in the proportions of manufactured and natural gas going into the mixture. This line is expected to be in service within the next six months.

SECOND: Panhandle-Eastern pipeline, 1100 miles long and is composed of 24, 22 and 20-inch pipe, extending from the Texas Panhandle field to Indianapolis, where it is planned to connect with the Columbia Gas & Electric Co.'s system, at a later date.

Third: Missouri Valley pipeline, 950 miles long and composed of 24 and 20-inch pipe, extending from the Texas Panhandle field to Minneapolis.

High pressure natural gasoline plants, such as will be on these lines, can be operated much more economically than can low pressure gasoline plants treating casinghead gas, on account of the absence of field lines, compressors to boost the pressure and, also, the low oil and gas ratio required, due to the comparatively high gas pressures.

Leading carbon black companies have been participating actively in the natural gas business and it is anticipated that the amount of natural gasoline produced from the natural gas used in the manufacture of carbon black will continue to decrease, on account of the diminishing capacity of natural gas used for this purpose.

The chief reason for the de-

*Columbian Gasoline Corp.

crease in natural gas used in the manufacture of carbon black in Louisiana, is the competition offered by long natural gas lines, such as those from the Monroe and Richland Fields to St. Louis, Memphis, Baton Rouge, Alexandria, New Orleans and Atlanta.

At the present time, only about 30 per cent of the natural gas produced in the Monroe and Richland, Louisiana gas fields is used in carbon black manufacture. A large percentage of gas so used is of low pressure and not suitable for pipeline delivery at this time, on account of the present adequate supply of high pressure gas.

THE expansion of the carbon black industry during the past three or four years in Texas has been due to the immense volume of residue casinghead gas produced in the Panhandle oil fields, which has utterly outrun the power of pipelines to market, or of local communities or industries to consume. Before the advent of carbon black plants, this residue casinghead gas, being unmarketable for any purpose, had been blown off into the air. At the majority of gasoline plants treating casinghead gas in the Panhandle, whatever value the residue gas has today may be attributed solely to the carbon black industry.

We are advised that, in the Texas Panhandle, there were produced in 1930, from 53 natural gasoline plants, over 290,000,000 gallons of natural gasoline and, from the 24 carbon black plants, approximately 200,000,000 pounds of carbon black, regardless of the fact that approximately only half of the residue gas was used for carbon black manufacture—the other half having been wasted to the air.

The yearly capacity of carbon black plants in the United States is about 400,000,000 pounds, while the estimated production for 1931 is 220,000,000 pounds. This curtailment in production is brought about by the fact that there is a large supply of carbon black in storage.

It is problematical as to the portion of casinghead gas now being blown into the air that will be utilized, or converted into natural gas pipelines. This is due to the fact that, especially in the Texas Panhandle, there is such a vast amount of natural gas under comparatively high pressure, that it would not seem economical, particularly within the immediate future, to try and compress gas for pipeline delivery that is now being blown into the air, on account of compression costs.

The future marketing of residue casinghead gas from gasoline plants to carbon black plants is also problematical, in view of the depressed condition of the carbon black industry. On account of the underconsumption, or overproduction, of carbon black and, with the large stocks on hand, it would seem that there will be a slow recovery of the carbon black industry to a point where prices for the product will give the manufacturer a reasonable margin of profit.

Indications are that there will be very little, if any, expansion in the construction of carbon black plants during the next few years, and it is probable that casinghead gas, in oil fields remote from the centers of civilization—before markets for gas can be developed by the construction of pipelines—will prove the raw material for carbon blacks in the future. The gasoline will, of course, be extracted before the gas is burned. Thus, in furnishing a market for residue gas that would otherwise be utterly wasted, the carbon black industry is performing a service of the highest value to the cause of conservation.

THE average yield of carbon black per thousand cubic feet of gas burned in 1929 was 1.40 pounds compared with 1.42 pounds in 1928. This apparent inefficiency is not a fact, as no one has thus far discovered a means of materially increasing the yield of carbon black without losing some of the qualities peculiar to carbon black alone and to which it owes a large part of its sales.

The manufacture of carbon black is an established business that has been conducted for over 50 years. Its origin and growth were coincident with the development and general adoption of the modern rotary printing press, which requires a thin, rapidly flowing ink of great covering power.

Originally, Pennsylvania was the seat of the industry. As gas in that state became more valuable, the carbon black manufacturer reached out for a cheaper gas supply and did much pioneer work in developing the West Virginia gas fields. Fifteen years later, when favorable opportunities arose to sell their West Virginia gas production, they again sought new sources of gas supply for their manufacturing operations. This time, their efforts were rewarded by the development of the great Monroe, Louisiana gas field.

THE carbon black industry is dependent upon a supply of cheap gas and, to find such a supply, it has had to migrate before the encroachment of the higher priced uses for natural gas. A distinct step in this migration occurred during the last half of 1928, when the center of production moved from Louisiana to Texas. Accordingly, Texas was the leading producing state in 1929, with a total output of 228,183,000 pounds, or 126 per cent above its 1928 output.

In the manufacture of this carbon black, residue gas was used that would otherwise have been an absolute waste.

The most important use of carbon black is in the manufacture of rubber and the most remarkable chapter in the story of carbon black has been its world-wide adoption by the rubber trade during the past decade. Those of us who owned automobiles in the early days vividly recall how frequently our pleasure was spoiled by a puncture or blowout. Such incidents were almost daily occurrences, usually at the most inopportune time and place.

Finally, the rubber chemists, after a long search for something that would make tires tougher and more serviceable, hit upon carbon black. Its success was immediate and spectacular. Beginning with one or

two of the larger American manufacturers, the use of carbon black in tire-tread stocks rapidly spread throughout the entire rubber industry.

Everyone knows that tires give two or three times as much service as they once did, but few of us have ever troubled ourselves to ask why. Still fewer realize that a natural gas product has anything to do with it. The popular impression probably is that the use of any substance other than rubber in a tire is only to color, or cheapen it. Nothing could be farther from the truth. Carbon black is universally employed in tire-treads, not because of its cost or color, but because it adds to the tensile strength and resiliency, toughens the rubber, increases its resistance to abrasion, minimizes punctures and blowouts and, thus, insures greater mileage.

The second important use of carbon black is in the manufacture of printer's ink. Our modern newspaper is dependent, in a physical sense, upon three natural sources, namely: our forests for their paper, and our natural gas and oil for their ink. News inks are made by mixing carbon black and mineral oil in the approximate proportions of one pound of black to eight or nine pounds of oil. A single pound of carbon black thus mixed with oil will print 20,000 pages of average newspaper size; or, the equivalent of almost an acre of surface.

The third important use of carbon black is as a coloring agent in paints, varnishes and lacquers.

Carbon black is also a valuable ingredient in the manufacture of such products as shoe and stove polishes, phonograph records, artificial stone, crayons and carbon paper.

When a new oil field, with a high gas-oil ratio is discovered at a distance from the existing gas markets, the natural gasoline manufacturer will be the first gas buyer of casinghead gas. Under normal conditions, the carbon black manufacturer would be a buyer of waste residue gas, after the field is sufficiently developed to make the supply fairly well assured.

Under the present and anticipated immediate future conditions, it would seem that the gasoline manufacturer will not be able to market additional residue gas through carbon black manufacture. Therefore, the gasoline manufacturers who are fortunate enough to market a part of their residue gas to carbon black manufacturers are in a more favorable position and may be able to operate their gasoline plants without a loss under the existing conditions, with prices of natural gasoline at a low point and prospects for the prices during the remainder of the year not to exceed, to any great extent, those of the present time.

TORONTO—A flow of 540,000 cubic feet of gas per day was struck by the Acme Oil & Gas Co. on the farm of Frank Lymburner, near Tillsonburg, Ont., recently.

Alden is Cities Service Chief Chemist

BOSTON, Mass., May 14.—A. H. Alden, Jr., has been made chief chemist of the Cities Service Refining Co. He succeeds W. W. Scheumann, who was given a similar position with the Empire Oil & Refining Co.

Mr. Alden came to Cities Service direct from the Massachusetts Institute of Technology in 1927. He has been chief control chemist.

A. H. Alden, Jr.

London Chemist Joins Universal Staff

CHICAGO, May 14.—Alfred Fisher, of London and New York, has joined the staff of Universal Oil Products Co. to carry on certain phases of research and development work. Mr. Fisher is a chemist and chemical engineer who has for years specialized in development work in connection with coal and gas.

He is a graduate of the scientific course of the University of London.

During the war, he was employed by the British government in work on explosives and poison gas. For the past ten years he has been engaged on problems of oil production from coal, carbonization at high and low temperature and gas production.

He is a member of the Institute of Chemistry at Great Britain, the American Chemical Society, the American Institute of Mining and Metallurgical Engineers, and other scientific societies.

To Build Crude Line

TULSA, May 16.—The Globe Oil & Refining Co. has asked for bids for the construction of a 6-inch crude oil pipeline from the Ritz-Canton field in McPherson county, Kansas, to the company's refinery at Blackwell, Okla.

The line would be approximately 115 miles in length. The field is almost due north of Blackwell. Although under severe proration it has a developed potential production of 54,615 barrels as of May 1, according to the umpire's report.

TORONTO—The smallest crude deliveries since Sept., 1930 from the Turner Valley field to the refineries of Imperial Oil, Ltd., and Regal Petroleum Co. were reported in April, when they totaled 114,220 barrels. Deliveries in March were 129,000 barrels, in February 132,250 barrels and in January, 156,650 barrels.

Effect of New Natural Gasoline Grading System on Plant Operations

By R. C. Alden*

(Presented before Natural Gasoline Association of America, Tulsa, May 19-21)

NO DOUBT you have all compared your plants' products with the new grading system. Consequently you are aware of what it will mean in your own operations. There are, however, several relationships which may prove of value in applying the new grading system to plant operation.

In some ways it is to be regretted that the new grading system includes 24 grades. The large number of possible grades has a tendency to discourage both buyer and seller. However, the number of *probable* grades is considerably less than 24.

A recent quality survey of the products of plants of the Phillips Petroleum Co. showed that 95 per cent of the normal production of these plants would fall in ten grades in covering the entire vapor pressure range of the grading system below 30 lbs. There were occasional instances of plants which fell on both sides of the emphatically definite trend of the great majority.

The question immediately occurs, "Why 24 possible grades?" The answer is that with the exception of the "northwest" corner of the grading system, natural gasolines have been encountered for each of the possible grades. Very rarely such occurrences are due to the nature of the natural gas treated. More often they are the products of plants too small to justify the investment necessary for efficient extraction of pentanes and heavier or the careful control of propane and butane contents. It would be unfair to exclude such materials from the grading system. However, they represent only a very small proportion of the total natural gasoline production.

It is almost certain that no one in this room has shipped a finished product falling in the five grades with 25 to 40 at 140 and above 14 lbs. vapor pressure. Shipments in the three grades above 22 lbs. vapor pressure with 40 to 55 at 140 will undoubtedly be comparatively rare as will be shipments in Grade 14-70. It is also believed that the two grades remaining in the 30-34 lb. vapor pressure range will be in little demand. Thus, from a practical viewpoint, there remain 13 grades for the consideration of all, save the exceptional buyer or seller.

Three of these 13 grades (the 14 lb. grades) are practically butane-free gasolines; three (the 18 lb. grades) are gasolines of about 15 per cent butane content and are suitable for tanker shipment, in other words, they are export natural gasolines. The remaining seven grades are comparable with the natural gasolines which have been customarily used in the past by refineries for blending.

Thus it is apparent that the multiplicity of possible grades in the new system will not be as serious a factor as would at first appear. The refiners have been accustomed to five grades. In effect, the new grading system substitutes seven grades for these five.

At the same time, the range of products has been increased to give the natural gasolines of restricted butane contents an opportunity to find markets at

*Phillips Petroleum Co.

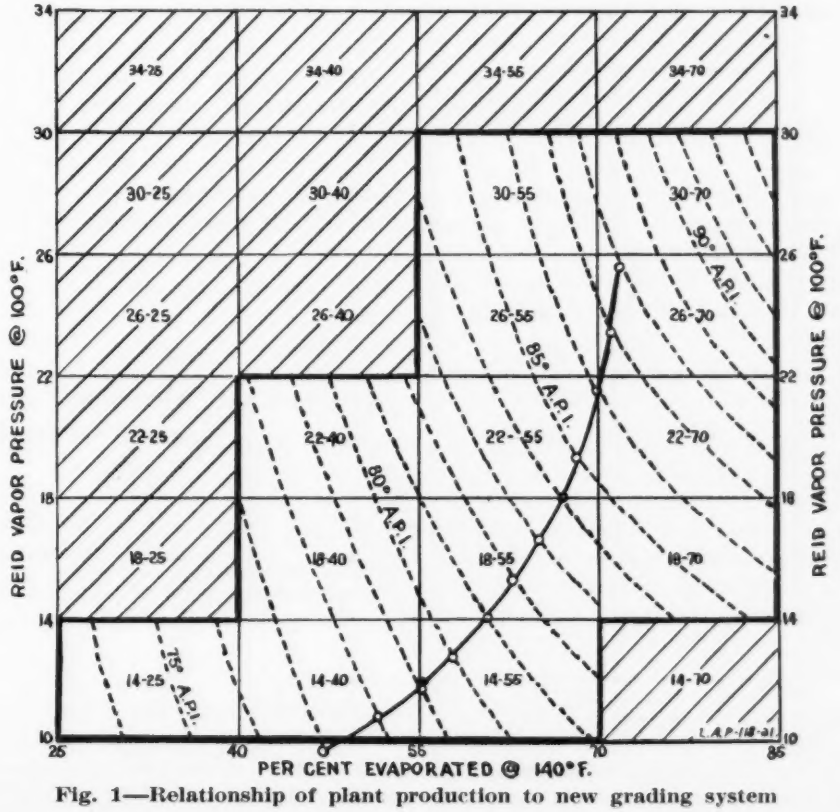


Fig. 1—Relationship of plant production to new grading system

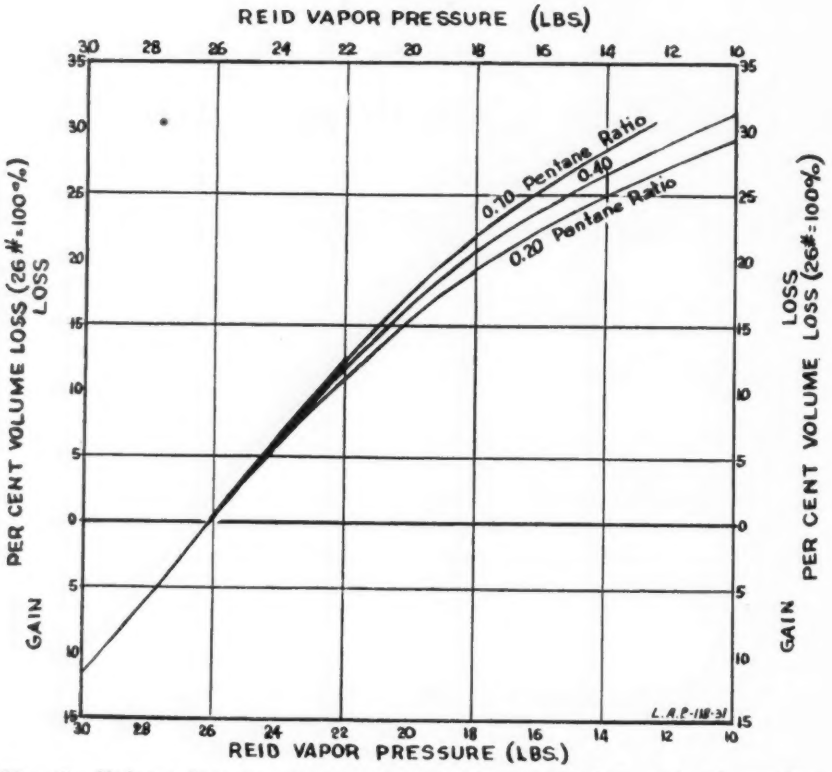


Fig. 2—Volume loss vs. vapor pressure of propane free natural gasoline

their proper price levels. In addition, the rare or freak natural gasolines can find markets without affecting the markets of normal products.

Perhaps too much emphasis has been placed on the freak and rare gasolines, without due regard for the normal trend of the great majority of natural gasolines. The writer believes that, barring radical changes in gasoline plant operation, at least 90 per cent of the natural gasoline production will be moved in the 13 grades mentioned above. At any given time, depending on economic conditions, the emphasis will be on the high or low vapor pressure products.

It is difficult to predict for the future in this regard, but the new grading system provides sufficient flexibility for any conceivable economic changes. It is probable that the increasing production and conservation of light hydrocarbons at refineries will place future emphasis on natural gasolines of relatively low vapor pressure.

Perhaps the question most frequently asked about the new grading system in regard to the loss in changing from one grade to another. To arrive at an informative answer to this question, it must be realized that the quality of the natural gasoline produced by a given plant is dependent on the quality of the natural gasoline in the gas processed and on the equipment available for extraction and fractionation. Thus, a given plant will yield products following a very definite curve across a chart representing the grading system as shown in Fig. 1.

The location and the general slope of the curve will depend on the pentane ratio[1] of the gasoline extracted, while the efficiency of fractionation will determine the rate of curvature.

Since very efficient fractionation results in almost straight trends, curvature of the trend for a plant indicates either inefficient fractionation or transfer of fractions. For products below 21 lbs. the curvature is usually to the left, indicating losses or transfers of pentanes and heavier. Above 21 lbs. the curvature is usually upward, indicating additions of propane.

Observing the trend curves shown on Figure 1, it is to be noted that considerable changes can be effected in the vapor pressure of a plant's product without much effect on the per cent evaporated at 140° F. Thus with efficient fractionation of gasolines produced from bases with a pentane ratio of 0.45, the resultant products are in only one of the distillation ranges (55 to 70), while the vapor pressure (26.8 to 12.3) falls in five ranges.

The volume loss under these conditions in reducing the gasoline from 70 to 55 at 140 is estimated to be about 30 per cent as compared with a loss of only 11 per cent in reducing the vapor pressure from 26 to 22 lbs. From this it is apparent that the control point for gasoline plant operation under the new grading system is bound to be the vapor pressure of the finished product.

Gasolines made at the upper limits of the several vapor pressure ranges of the new grading system will have the maximum per cent at 140 possible with the raw materials and equipment available. Furthermore, a study of Fig. 1 shows that these maxi-

[1]Pentane ratio is the ratio of pentanes and heavier (volumetrically).

Table 1

Maximum and Minimum Price Ratios to Equalize Gasoline Plant Income Under New Grading System[1]

Vapor Pressure	Poor Propane Elimination				Perfect Propane Removal			Average of Fifth and Eighth Columns (Price Ratio)
	Propane Content	Butane Content	% Vol. Loss	Price Ratio	Butane Content	% Vol. Loss	Price Ratio	
30	.....	.....	.....	.....	41.9	—11.7	0.896	.....
26	2.0	21.5	0	1.000	32.0	0	1.000	1.000
22	0.5	19.5	4.8	1.051	23.2	11.5	1.129	1.090
18	0	14.4	10.3	1.116	14.4	20.5	1.258	1.187
14	0	7.5	17.3	1.209	7.5	26.5	1.362	1.286
10	0	0	23.5	1.308	0.0	32.0	1.471	1.390

[1]It is assumed that no losses of pentanes will be encountered. Such losses would raise the price ratios and would be most frequently encountered at plants with poor propane elimination. Consequently the ratios in the eighth column will more nearly represent average conditions than those shown in the fifth column. The last column is suggested as an approximate average.

A new gasoline standard–

The urge of competition sets it

The motorist insists on it

Dubbs cracking meets it

Knock rating is the measure of gasoline quality The premium gasoline of yesterday is the average of today and the average is going up

Dubbs cracking meets the new gasoline standard

Universal Oil Products Co
Chicago, Illinois

Dubbs Cracking Process
Owner and Licensor

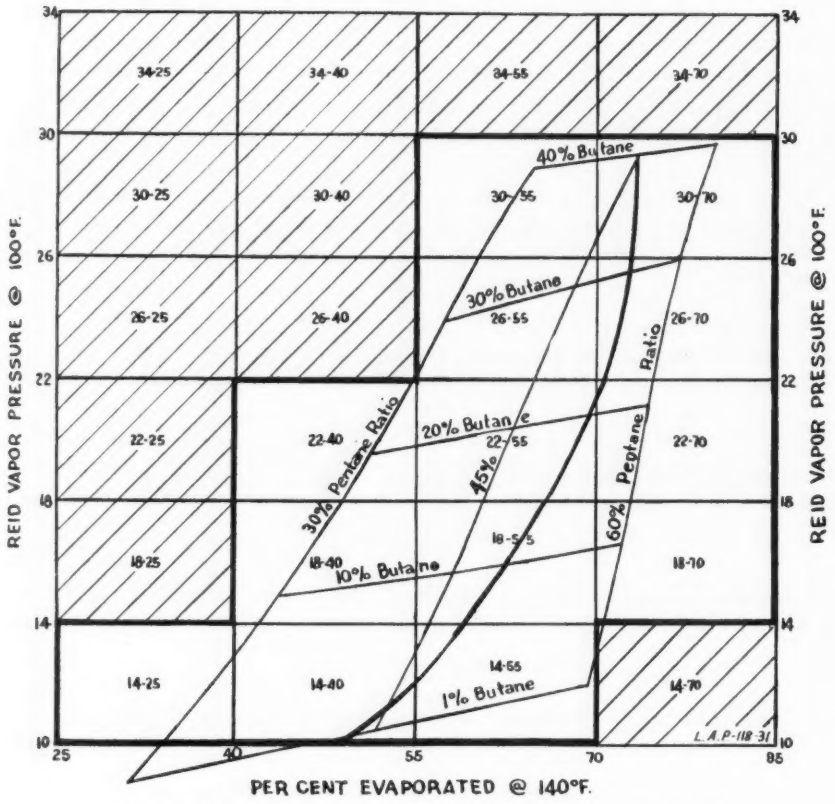


Fig. 3—Relationship of gravity to the new grading system

mum vapor pressure products represent the maximum yields within the same limitations.

It is obvious that the ability of a given plant to extract and conserve the pentanes and heavier, to extract sufficient butane, and to eliminate propane will have a decided influence on the location and shape of its particular trend with respect to the grading system.

With reasonably good plant design and operation, the essential factor locating the trend is the pentane ratio of the gasoline extracted. This, of course, is beyond the control of the operator. But it limits the quality of the product made to fairly definite per cents at 140 for each of the several vapor pressure limits.

These factors lead to the conclusion that consideration of losses in passing from one grade to another will be limited almost entirely to loss as a function of vapor pressure change of the finished products. The per cent at 140 will become a factor in the price structure of the new grading system only to the extent of the demand and supply relationships for grades of equal vapor but varying distillation characteristics.

Figure 2 shows graphically a theoretical calculation of volume loss as a function of vapor pressure change for gasolines having pentane ratios between 0.2 and 0.7. In the calculations, the gasolines were assumed to be propane-free, and losses were calculated on the basis of products of 26 lbs. vapor pressure.

The chart shows that volume losses for vapor pressure changes are almost independent of the pentane-ratio. This is in contrast with the volume loss to effect changes in the per cent at 140, where the loss increases rapidly with increases in pentane ratio as may be deduced from a study of Fig. 1.

This relatively constant volume loss of about 2 to 3 per cent per pound of vapor pressure change is an added reason to believe that the vapor pressure specification will be the major factor in establishing the price structure under the new grading system. Regardless of the raw material available, all manufacturers will have practically the same change in yields in passing from one vapor pressure limit to another.

Using average loss data from Fig. 2, the last three columns of Table 1 have been prepared to show the price ratios necessary to equalize gasoline plant income at the several vapor pressure limits of the new grading system. These data of Table 1 and Fig. 2 are based on the assumption that the gasolines are propane free and that no pentanes are lost.

In actual practice this condition rarely exists, so that the loss and gain figures in the seventh column of Table 1 can be considered maximum figures.

To show the opposite extreme, namely, where propane elimination is poor, the second to fourth columns of Table 1 are included. Obviously less volume loss will be encountered in reducing vapor pressure due to propane. Consequently, the lower vapor pressure grades can be sold at a lower relative price than where the vapor pressure adjustment is thru control of the butane content only. Because loss of pentanes is usually a factor at plants where propane elimination is poor, the actual relative prices should never be as low as shown in column five of Table 1.

The average values shown in the last column of Table 1 are fairly close to actual conditions as observed in the manufacture and sale of considerable quantities of natural gasolines of restricted butane content in the operations of the Phillips Petroleum Co.

When price ratios are expressed in terms of the 26-pound vapor pressure gasolines, the efficient operator is at a disadvantage in marketing natural gasolines of restricted butane content. For example, the operator with good propane removal is compelled to ask 1.258 times the going price for 26-pound natural, while the inefficient operator requires only 1.116 times this price for 18 pound natural.

As a possible means of overcoming this difficulty the use of prices for 14 pound natural as the basis places the penalty for propane inclusion on the operator. Table 2 shows the relative prices on this basis. As an example, the efficient operator can sell 26-pound natural for 0.735 times the going price for 14-pound natural while the ineffi-

Repeat order for
Gulf Refining Company

—additions to Staten Island Storage Plant increase capacity to 2,592,000 barrels

EXTENSIONS at Staten Island—recently completed—give the Gulf Refining Company greatly increased facilities for serving the New York market.

The plant, which we designed and built in cooperation with the client's organization, occupies a 500-acre tract, stores 2,592,000 barrels of oil and includes oil pumping, drainage and steam plants, two large tank farms, 75 miles of piping, oil separating and reclaiming plant and other facilities.

The work came to us as a repeat authorization following our completion of the first unit last year.

During the past 10 years, 74% of our work has been repeat orders like this from clients previously served.

Our experience is available for industrial, power, railroad and monumental undertakings anywhere in the world.

UNITED ENGINEERS & CONSTRUCTORS, INC

combining

Day & Zimmermann Engineering & Construction Co.
Dwight P. Robinson & Co., Inc.
The U. G. I. Contracting Co.
Public Service Production Co.
United Engineers & Constructors (Canada) Ltd.
Dwight P. Robinson & Company of Brazil, Inc.
Dwight P. Robinson & Company of Argentina, Inc.

Design and Construct

INDUSTRIAL PLANTS
STEAM POWER STATIONS
HYDRO-ELECTRIC DEVELOPMENTS
RAILROAD WORK
GAS PLANTS
PIPE LINES

Build

APARTMENTS
HOTELS
OFFICE & MONUMENTAL BUILDINGS

UNITED ENGINEERS & CONSTRUCTORS
INCORPORATED
DWIGHT P. ROBINSON, PRESIDENT

PHILADELPHIA NEW YORK NEWARK BOSTON CHICAGO
LOS ANGELES MONTREAL TORONTO BUENOS AIRES RIO DE JANEIRO

MAXIMUM RETURN TO CLIENTS PER DOLLAR INVESTED

cient operator must ask 0.827 times this base price.

The difficulty in the way of establishing such a viewpoint is that large quantities of 26-pound naturals can be sold at prices approximating U. S. Motor prices. The 14-pound natural must be sold at prices approximating 68-70 gasoline and consequently is moved in only small volumes. However, such a revision of viewpoint would materially assist both buyers and sellers of natural gasoline.

In changing from one grading system to another, the change in yields is a major consideration. It may be interesting to quote the conclusions in this connection made by the research department of our company. These conclusions were as follows:

1. Between 90 and 95 per cent of Phillips natural gasoline production has practically the same relationship to the new grading system.

2. This average relationship is such that practically all of our production will fall in seven of the new grades as follows: 30-70, 26-70, 22-55, 22-70, 18-55, 14-55 and 14-40. Grades 30-55, 26-55 and 18-40 should also be available in considerable quantities.

3. The plants producing gasolines abnormally low and high at 140 were ascertained.

4. In applying the new grading system to plant operation, the plants should use the vapor pressure limits of the new grading system as the control characteristic. A given plant's product will change through several vapor pressure limits without changing through a 15 per cent range for the 140° point.

5. It is estimated that the vapor pressure limits of the new grading system could be applied to the Phillips plants with almost negligible production losses. At the most these losses could not exceed four per cent. If vapor pressure increases can be efficiently accomplished the losses would be practically nil.

6. Based on the price of 14-pound natural gasoline as unity the ratios of the prices of 30, 26, 22, 18, 14 and 10-pound naturals should be 0.658, 0.735, 0.829, 0.925, 1.000 and 1.081 respectively to equalize income.

7. Based on the price of 26 pound propane free natural as unity the ratios of the prices of 30, 26, 22, 18, 14 and 10-pound naturals should be 0.896, 1.000, 1.129, 1.258, 1.362 and 1.471 respectively to equalize income.

Table 2

Price Ratios of Table 1 with 14 Pound Natural as Unity

Vapor Pressure	Poor Propane Removal	Perfect Propane Removal	Average
30	.....	0.658	.....
26	0.827	0.735	0.781
22	0.870	0.829	0.850
18	0.925	0.925	0.925
14	1.000	1.000	1.000
10	1.081	1.081	1.081

After the question in regard to relative yields of the new grades, the next most frequent question has been in regard to the method of use of the grading system by refiners. This subject has been admirably treated by S. S. Smith of the Shell Petroleum Corp. in papers presented before the Western Petroleum Refiners Association at Excelsior Springs on March 12, 1931, and before the Refining Division of the American Petroleum Institute at St. Louis last month. The former paper has been published in the NATIONAL PETROLEUM NEWS of March 11, 1931 (page 35).

Many refiners will undoubtedly be reluctant to abandon the old specification bases of distillation loss and gravity. They will agree that distillation loss was an irrational specification because of the differences in condenser and receiving temperatures in the distillation tests for natural and motor gasolines. The demand for information concerning gravity of natural gasoline will probably continue as long as sales departments continue to use gravity as a talking point. For this reason, manufacturers of natural gasoline should be prepared to inform their prospective customers of the approximate gravity of the products they have to offer under the new grading system. In the course of time it is to be expected that the necessity for this information will gradually disappear.

To assist in the transition from the old to the new grading system, Fig. 3 has been prepared. The solid curve is based on the actual shipments of natural gasoline from Phillips plants from Oct. 25 to Dec. 31 inclusive. Vapor pressure, distillation and gravity data of 5325 tank cars are represented by this curve. The dotted curves were located by plotting the individual plant's average data for restricted vapor pressure intervals and sketching the probable gravity trends. The points so plotted are not shown in the figure as presented here.

Due to variations in composition, deviations from the trends shown in Fig. 3 of plus or minus two degrees can be expected for products made at plants with reasonably efficient fractionating equipment. Greater negative differences can practically always be assumed to indicate excessive propane inclusion.

Positive gravity differences, especially in the higher vapor pressure ranges indicate the probability of superior propane elimination or unusually low iso-butane or iso-pentane contents. In considering Fig. 2 it should be remembered that it is based on Mid-Continent gasolines. Gasolines from California and eastern fields would tend to have lower and higher gravities respectively, particularly in the ranges of lower per cents at 140.

One important point in regard to the use of the new grading system which has not been stressed as much as it should, is the fact that the grading system is designed for average blending conditions where approximately 15 per cent of natural is used. When larger proportions are used, particularly in blending closely to a resultant vapor pressure specification, the four-pound ranges of the new grading system are too great.

In our blending operations, where 25 to 55 per cent of natural gasoline is used, we find it necessary to specify our natural gasoline by increments of one pound in vapor pressure. The same considerations would require more careful scrutiny of the per cent at 140° specification, but this is not so important.

The relationship of the new and old grading systems has been described in the announcements appearing in the various trade journals at the beginning of the year. It is, therefore,

MASTERWELD FABRICATION

Kellogg Seamless Cylinder Masterweld Reaction Chamber 60" ID., 4¾" thick, 43' 7¾" long. Working pressure 750 lbs. per sq. in. at 925° F. Test pressure 2,544 lbs. per sq. in. Weight 150,000 lbs.

. . gives this Kellogg reaction chamber the characteristics of a forged unit

Kellogg seamless cylinders rolled from clean steel of special analysis and joined by Masterweld girth seams, give this Kellogg reaction chamber a homogeneous structure ideally suited to high pressure, high temperature operation.

This vessel has no longitudinal seams. It is free from all strains and has a smooth rolled, unmachined surface which is unusually resistant to acid corrosion. The vessel has the physical characteristics of a solid forged unit.

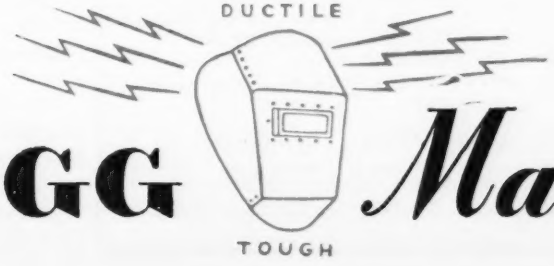
Kellogg seamless cylinder Masterweld vessels include reaction chambers, soakers; dephlegmator, fractioning, stabilizing and bubble towers. These vessels are inherently stronger and lighter in weight. Their unsurpassed reliability and the economy with which they can be fabricated make them a sound specification.

Write for the special bulletin containing complete details.

THE M. W. KELLOGG COMPANY
225 BROADWAY, NEW YORK, N. Y.

Birmingham, 827 Brown-Marx Building; Boston, 12 Pearl Street; Chicago, 1 La Salle Street; Los Angeles, 742 Western Pacific Building; Tulsa, Philtower Building

DUCTILE



TOUGH

KELLOGG *Masterweld*

A big fleet of *modern* cars;
4 large, privately owned shops to keep them in condition;
18 years' specialized experience.
SPECIAL *services to shippers, described on request. Address*

NORTH AMERICAN CAR CORPORATION
327 S. LaSalle St., Chicago, Ill.
Tank Cars for Lease. Domestic and Export Terminals Chicago, Tulsa, New Orleans.

Carbondale Refrigeration *for Refiners*

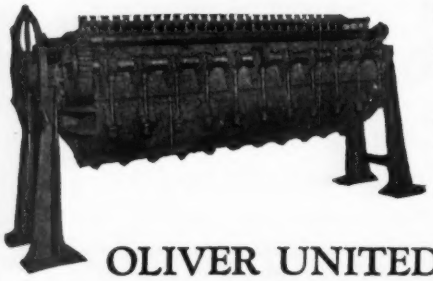
CARMACO

Send for a Copy of our Wax Plant Bulletin

Design of Complete Wax Plants—Absorption and Compression Refrigerating Machines—Wax Distillate Chilling Machines—High Pressure Filter Presses—Paraffine Wax Sweaters—Heat Exchangers and other Refinery Equipment.

CARBONDALE MACHINE COMPANY, CARBONDALE, PA.
SALES OFFICES
New York Los Angeles Buffalo Chicago Pittsburgh Tulsa Kansas City Philadelphia Boston

The *Sweetland* Filter as a Safe-guard



SINCE the basic value of lubricating oil is its freedom from anything even bordering on dirt or grit, all reasonable precautions for making it grit-free are desirable.

A special Sweetland Filter at the shipping station is an excellent safe-guard. Pass the oil through it on the way to the cars.

This is a precautionary step already in use.

OLIVER UNITED FILTERS INC.

SAN FRANCISCO, Fed. Reserve Bank Bldg. NEW YORK, 33 West 42nd St.
CHICAGO, 565 Washington Blvd. LONDON, W. C. 1, 150 Southampton Row
PARIS, T. L. Genter, Concessionaire, 63 Ave. des Champs Elysees.

BETHLEHEM
WAX PLANT EQUIPMENT

Filter Presses — *Wax Moulding Presses*
Wax Distillate Chilling Machines — *Scale Wax Cooling Drums*
Wax Testing Presses — *Paraffine Wax Sweater Plants*
Complete Wax Plants designed and built
Pumps, Stills, Towers, Condensers, and other Oil Refinery Equipment
Oil Burning Systems

BETHLEHEM STEEL COMPANY, *General Offices: Bethlehem, Pa.*

District Offices: New York, Boston, Philadelphia, Baltimore, Washington, Atlanta, Pittsburgh, Buffalo, Cleveland, Cincinnati, Detroit, Chicago, St. Louis.

Pacific Coast Distributor: Pacific Coast Steel Corporation, San Francisco, Los Angeles, Portland, Seattle, Honolulu.

unnecessary to repeat this comparison now. It perhaps should be emphasized that if a direct comparison were possible there would have been no reason to revise the grading system.

That the new specifications are more closely related to the really useful properties of natural gasoline can not be denied. Consequently, if the industry is sincere, and I believe it is, in attempting to place its products on a basis representing its true value, an earnest effort should be made to popularize the new grading system.

In conclusion, the present low price levels for all petroleum products offer a good opportunity to put the new grading system into practice. Neither buyer nor seller can go very far astray at present prices for natural gasoline. When better conditions prevail, mutual experience with the new grading system will serve to place the natural gasoline industry at its proper economic level.

New Refinery to Handle German Production

LONDON, May 14.—Construction of an oil refinery near Hanover, Germany by the Preussische Bergwerks-Huetten- A. G., a state-owned corporation, has been announced by that company. The construction will be carried out in conjunction with the Elwerath Mining Co., operating near Hanover.

The plant will likely be built along the Mittelland Canal, and will be probably of 70,000 to 80,000 tons capacity. It will be operated by a newly-formed mining company controlled by the Preussische organization.

Recent drilling activities in this section have shown that the oil possibilities of Hanover are much greater than has been thought heretofore. Previously some oil mining has been attempted, and a few wells sunk, but the production has been negligible. Recent wells have been drilled deeper and production has increased so the area has been suffering from a shortage in refining capacity. The construction of this plant indicates the optimism felt by those acquainted with the situation in the certainty of considerable amounts of oil being made available nearby.

New Refining Patents

Distilling Petroleum. U. S. P. 1 797-715, March 24, 1931, application filed Sept. 17, 1926; Irving C. Carpenter and Arthur R. Moorman, assignors to Contact Filtration Co.

IT HAS been considered impracticable to use tube stills for distilling crudes contaminated with water carrying scale-forming impurities, because scale deposits quickly clog the tubes. But a method of preventing such scale deposition has been devised, so that tube stills can now be successfully utilized for the specified purpose.

In the new process the oil circulates through a system comprising a tank, a pump, the heater and a separating chamber. The tank is kept hotter than the boiling point of water, and oil to be refined is separately added to the tank so that its water is vaporized. The vapors escaping from the tank are collected for recovery of the light hydrocarbons which are volatile at this temperature.

Any scale-forming material contained in the water is precipitated in the liquid oil, which carries it freely through the heater. In this heater the oil is raised to a higher temperature, and components volatile at this temperature are withdrawn as vapors, along with the oil, to the separating chamber. The amount of residuum withdrawn from the separating chamber is adjusted so as to maintain a constant oil volume in the tank. The system is so operated that oil coming from the heater to the tank supplies the heat, which is just sufficient to vaporize the water immediately on contact with the hot oil surface.

What is Claimed

Apparatus comprising a tank, a pipe still, liquid feed from tank to still, a separating chamber connected to the still and to the tank, a vapor vent in the separating chamber, and means controlled by the liquid level in the separating chamber for maintaining a constant volume of liquid in the tank.

* * *

Anti-Knock Gasoline. U. S. P. 1 797-819, March 24, 1931, application filed Nov. 12, 1925; Arthur B. Brown and Frederick W. Sullivan, Jr., assignors to Standard Oil Co. of Indiana.

IT HAS been found that gasoline having high anti-knock value can be made by cracking heavy oils in presence of certain nitrogen compounds, among which are ammonia, urea, ammonium carbonate, guanidine and dicyandiamide.

The proportion of nitrogen compound in the oil may vary within wide limits, but is preferably from 2 to 15 per cent. In operating the new process, oil is heated to about 750-850 degrees F. under sufficient pressure (e. g. 4 or 5 atm.) to maintain it in the liquid phase, in presence of a nitrogen compound till a predetermined proportion (e. g. 20 per cent) of the oil is converted to gasoline fractions. The product may be used as an anti-knock gasoline, or may be blended with other gasolines to increase their anti-knock rating.

What is Claimed

Cracking a high-boiling hydrocarbon oil under pressure in the presence of a nitrogen compound of the substituted ammonia type, thus producing cyclic nitrogen compounds in the oil, and distilling from the product a fuel in the gasoline range.

* * *

Liquid Phase Pressure Cracking. U. S. P. 1 798 054, March 24, 1931, application filed Feb. 11, 1924 and in Great Britain Feb. 20, 1923; Samuel J. M. Auld, Albert E. Dunstan and Percy H. Herring, assignors to Anglo-Persian Oil Co., Ltd.

FOR the purpose of cracking heavy asphaltic residues, both to obtain gasoline therefrom and to lessen the viscosity of the final residue so that it will be useful as a fuel oil, an improved modification has been developed of a known single cycle type of liquid phase pressure cracking process.

The new process avoids secondary vapor phase reactions, reduces formation of fixed gas, yields a good quality of light distillates, and restricts the quantity of light distillates so as to leave much of the lighter portion dissolved in the hot residue. This facilitates the carbon-removing effect of the residual oil, so that no carbon is deposited in the thermalizing tubes; all the carbon is carried into the reactor, from which it is readily removed.

The oil is first preheated to within about 25 degrees of the cracking temperature, and is then caused to flow slowly upward through narrow tubes in which heat is slowly and evenly applied, and thence into the reactor. This method avoids vapor accumulation and local overheating, so that no cracking occurs in the thermalizing tubes and no carbon is deposited therein.

By using a sufficient number of relatively short, narrow thermalizing tubes and suitably controlling the application of heat therein, the oil may be heated to about 20 degrees above the cracking temperature, so that it already has, on entering the reactor, an impetus toward cracking, so that the reaction may be completed under uniform temperature conditions. The process is applicable, for example, to Persian gas oils, Scottish shale oils, and asphaltic residues from Mexican oils.

What is Claimed

A single pass liquid phase pressure cracking process in which oil is heated in a single stream to below the final cracking temperature and passed slowly in narrow streams into a reactor, being heated in the narrow streams slowly and evenly to a cracking temperature without causing cracking, and the cracking reaction is consummated in the reactor, from which the treated liquid is withdrawn.

* * *

Carbon Separation in Cracking Oil. U. S. P. 1 796 507, March 17, 1931, application filed July 9, 1924; Roy Cross, assignor to Gasoline Products Co., Inc.

THIS invention relates to an improved system for removing accumulated carbon or coke from the treated oil in cracking operations. Its novelty lies in collecting the unvaporized portion of oil from a cracking apparatus in a tank where the oil is allowed to become stagnant, so that carbon particles settle and are drawn off at the bottom, while relatively carbon-free oil rises and is withdrawn from the top for removal to a cooling zone.

To facilitate the settling, the tank is heavily insulated against heat loss so that the fluidity of the oil will not be lessened by cooling. It may even be desirable to supply a small amount of heat to maintain fluidity, provided it is done without setting up convection currents or otherwise causing turbulency in the oil.

The relatively carbon-free oil withdrawn at the top may be used as an improved fuel oil, or it may be utilized in the cracking process to increase the gasoline yield. The new process is applicable, for example, to a Mid-Continent gas oil of about 30° gravity, cracked under 100 to 200 lb. pressure at 600 to 900°F.

What is Claimed

Heating oil to a cracking temperature without substantial conversion, collecting the oil from the heating stage and distilling off the lighter fractions in a vaporizing stage, refluxing and condensing the vapor, directing the unvaporized portion into a stagnant pool which can be heated to facilitate settling of free carbon, and separately withdrawing heavy settlings at the bottom, and relatively carbon-free oil at the top, whereby turbulency in the oil is prevented.

* * *

Activating Adsorbent Clays. U. S. P. 1 796 799, March 17, 1931, application filed Oct. 20, 1926; Robert E. Manley and Merton L. Langworthy, assignors to the Texas Co.

SINCE the acid activation of clays, for use in decolorizing oils, depends on removal of acid-soluble components as a means of increasing por-

osity, the batch treatments which characterize prior practice are limited in their efficacy by equilibrium conditions. A continuous counter-current process for treating clays with acid has now been developed. It overcomes the limitation imposed on batch processes, permitting thorough utilization of the acid and practically complete removal of the acid-soluble matter from the clay. Thus it becomes possible to impart maximum efficiency to the clay at a minimum cost for treatment.

In operating the new process, the earth to be activated is fed to the first of a series of thickeners, heated by steam coils and fitted with reflux condensers and suitable stirrers. Fresh acid, preferably sulfuric acid diluted with water to the desired strength, is fed to the thickener at the opposite end of the series. Each thickener is so arranged that the clay, settling to the bottom after traversing the acid, is pumped to the next thickener and is withdrawn from the last to a storage tank. Spent acid is withdrawn at the opposite end.

It has been found that this system permits use of much weaker acid than in older processes; the preferred concentration is about 8 to 10 per cent. This permits a large saving, because it makes available the spent acid from petroleum refining processes. Such acid can be diluted with water to precipitate sludge, and used directly for activating clay, so that the acid cost for the treatment is very small.

What is Claimed

Activating clay, for decolorizing oil, by flowing clay through a treating apparatus in contact with a counter-current flow of hot dilute sulfuric acid, approximately 10 per cent strength, and separating the acid from the clay whereby acid-soluble constituents of the clay are removed.

* * *

Sweetening Gasoline. U. S. P. 1 798-784, March 31, 1931, application filed July 8, 1929; Hugh H. Cannon, Assignor to Cannon-Prutzman Treating Processes, Ltd.

IN TWO prior applications, the inventor of this process has disclosed certain improvements in reagents for sweetening gasoline, depending on the general method of making up an alkaline earth hydroxide, litharge and diatomaceous earth into a cake in a filter press, and filtering the sour oil through this cake. But the reagent thus disclosed, though an advance over previous practice, was slow-acting, and the filter-cake did not permit sufficiently rapid flow. These difficulties have now been overcome by changes both in the reagent and in its manner of use.

The reagent specified for the new process is made up from specified proportions of caustic soda, slaked lime, commercial litharge, diatomaceous earth or its equivalent, and water. It is preferably prepared by dissolving the caustic soda in the water, stirring in the slaked lime to form a thin, smooth cream, and stirring in the litharge to form a thick, smooth cream. This is then mixed with the diatomaceous earth to form a damp, slightly coherent powder.

Sulfur corresponding to the amount of mercaptan sulfur to be removed is dissolved in the oil to be treated; this solution is then pumped through contactors containing the improved reagent, the powder being allowed to subside before the oil is pumped to filter presses to remove the small amounts of entrained powder. This reduces costs by substituting the inexpensive percolation contactors for part of the more costly filters used in the prior process. The contactors are so arranged that either may be used first, the flow being upward in the first and downward in the second, to facilitate maximum utilization of the reagent.

What is Claimed

A substantially dry reagent powder for sweetening gasoline, comprising an intimate mixture of litharge, an alkaline earth hydroxide, an alkali metal hydroxide and a porous earth.

New Patents

Prepared by R. E. Burnham, patent and trade-mark attorney, 1343 H Street, N. W., Washington, D. C., from whom copies may be obtained at the rate of 20c each. State number of patent and name of inventor when ordering.

April 21, 1931

MISCELLANEOUS

Floating deck for liquid storage tanks—John H. Wiggins, Tulsa, Okla. No. 1,801,582.

Shut-off valve and control for tank trucks—Joseph H. McEachern, San Francisco, Calif., assignor to Standard Oil Co. of California. No. 1,801,749.

Tank-truck emergency-valve system and controller—Joseph H. McEachern, San Francisco, Calif., assignor to Standard Oil Co. of California. No. 1,801,750.

Method of revivifying treating agents—Reginald K. Stratford and Gordon McIntyre, Sarnia, Ont., Canada, assignors to Standard Oil Development Co. No. 1,801,942.

May 5, 1931

REFINING

Apparatus for the stabilization, rectification, and fractional distillation of natural gasoline—Francis S. Woidich, Sapulpa, Okla. Filed Nov. 6, 1924. No. 1,803,581.

Process of treating hydrocarbon oils with metallic halides — Richard W. Hanna, Piedmont, Calif., assignor to Standard Oil Co. of California. Filed Jan. 22, 1927. No. 1,803,670.

Distillation system—Arthur F. Keane, Syracuse, N. Y., assignor to Semet-Solvay Engineering Corporation, New York, N. Y. Filed Apr. 17, 1926. No. 1,803,671.

Method of producing lubricating oils—Erwin R. Lederer, Fort Worth, Tex., assignor to Texas Pacific Coal & Oil Co., same place. Filed Mar. 5, 1929. No. 1,803,941.

Process and apparatus for vapor fractionation—Donald J. Bergman, Chicago, Ill., assignor to Universal Oil Products Co., same place. Filed Apr. 22, 1927. No. 1,803,956.

Process for converting hydrocarbon oils—Carbon P. Dubbs, Wilmette, Ill., assignor to Universal Oil Products Co., Chicago, Ill. Filed June 1, 1925. No. 1,803,962.

Process of cracking petroleum—Gustav Egloff, Chicago, Ill., assignor to Universal Oil Products Co., same place. Filed Dec. 21, 1925. No. 1,803,963.

Process of desulphurizing cracked hydrocarbons—Gustav Egloff, Chicago, Ill., assignor to Universal Oil Products Co., same place. Filed June 26, 1926. No. 1,803,964.

Process for cleaning dephlegmators—Lyman C. Huff, Chicago, Ill., assignor to Universal Oil Products Co., same place. Filed Oct. 18, 1923. No. 1,803,696.

Apparatus for cracking oils—Robert T. Pollock, New York, N. Y., assignor to Universal Oil Products Co., Chicago, Ill. Filed Mar. 14, 1921. No. 1,804,028.

PRODUCTION

Drill-cutter-retaining means — Floyd L. Scott, Houston, Tex., assignor to Huges Tool Co., same place. Filed Dec. 16, 1925. No. 1,803,679.

Circle brace—Nelson K. Smith, Los Angeles, Calif., assignor to Byron Jackson Co., West Berkeley, Calif. Filed Apr. 25, 1928. No. 1,803,681.

Automatic valve for fluid-lift devices—James W. Taylor, San Antonio, Tex., assignor to Economy Pump & Oil Tool Co. Filed Apr. 9, 1927. No. 1,803,683.

Core-bit plug—Floyd L. Scott, Houston, Tex., assignor to Hughes Tool Co., same place. Filed Feb. 16, 1929. No. 1,803,731.

Jar mechanism for well drilling—William D. Shaffer, Brea, Calif. Filed Apr. 8, 1930. No. 1,803,732.

Core-position indicator for well-drilling apparatus—John E. Abler, Hollywood, Calif. Filed July 9, 1928. No. 1,803,785.

Well-casing and method of removing the same from a well—Omar A. Cavins, Glendale, Calif. Filed Jan. 2, 1929. No. 1,803,839.

Packer—Erd V. Crowell, Los Angeles, Calif. Filed May 16, 1928. No. 1,803,841.

Cable tool underreamer—Robert E. Simpson, Taft, Calif. Filed July 30, 1925. No. 1,803,873.

Well-capper—Horace G. Retherford, Vilas, and Samuel T. Elmore, Campo, Colo. Filed Nov. 11, 1930. No. 1,803,945.

Well-pump apparatus — Clarence E. Backus and Douglas G. Williamson, Parkersburg, W. Va. Filed Mar. 11, 1929. No. 1,804,077.

Means for preventing corrosion in pipes — Martin W. Baden, Winfield, Kans. Filed Nov. 26, 1928. No. 1,804,078.

Coupling or T for use in connection with oil-well tubing — Sheridan T. Tschappat, Tulsa, Okla. Filed May 19, 1930. No. 1,804,290.

MISCELLANEOUS

Fire-prevention systems for tanks—Stephen H. Brooks, Los Angeles, Calif., assignor to Brooks Engineering Corporation, same place. Filed Dec. 15, 1926. No. 1,803,460.

Lubricating compound — George L. Southard, Franklin, Pa. Filed Nov. 24, 1926. No. 1,804,124.

A. P. I. Member to Attend Weights Conference

NEW YORK.—A representative of the American Petroleum Institute's division of marketing will attend the 24th national conference on weights and measures, to be held at Washington, D. C., June 2 to 5. It will be held at the Bureau of Standards, according to F. S. Holbrook, secretary.

Merchandising and Jobbing Ideas Marketers Are Practising

By E. L. Barringer
N. P. N. STAFF WRITER

A MERCHANDISING idea that increases the cost of an automotive service yet increased its popularity has been worked by the Alemite Service Co., Montgomery, Ala., a local company specializing in car washing, greasing and repairing.

This company would simonize a car for $6. Results on the body were acceptable, but if the underpart of the fenders was dulled the job did not look finished. So the company raised the price of simonizing to $7.50, and included painting the underpart of the fenders.

Results were more satisfactory to the customer as his car was much improved in appearance by the new service. Even for an outlay of $6 the customer wanted a car looking as nearly as possible like new, but the dull underpart of the fenders detracted from the appearance of the car. After a few jobs at $7.50 had been turned out the company began getting results through word-of-mouth advertising from the more satisfied customers.

* * *

Work Schedules Necessary To Make Sales

Certain chores are necessary around a service station, the same as any other place of business, to keep the place clean and the equipment in good working order. This work seems unproductive in itself, but if the duties are performed faithfully the results will be apparent in the sales report.

Oil companies generally divide the work of cleaning up stations between the two shifts, and also by days in order to keep in balance. The following work schedule is in force at stations of the O'Day Oil Co., Fort Wayne, Ind.:

Sunday (Morning)

Sweep floor; clean wash room; and wipe lube equipment.

(Afternoon)

Wipe off pumps; police drive and grounds.

Monday (Morning)

Polish stove; clean wash room; wipe lube equipment; police drives and grounds; and sweep floor, and wipe shelves and woodwork.

(Afternoon)

Polish and oil pumps and clean globes; clean drain pit; wash and polish signs.

Tuesday (Morning)

Sweep floor; clean wash room; wipe off pumps and globes; wash windows and sills; paint curbings.

(Afternoon)

Wipe lube equipment; clean all shade lights; police drives and grounds.

Wednesday (Morning)

Sweep floors and wipe shelves and woodwork; clean wash room; wipe lube equipment; clean drain pit.

(Afternoon)

Polish and oil pumps and clean globes; police drives and grounds.

Thursday (Morning)

Polish stove; sweep floor; clean wash room; wipe off pumps; clean transom lights; police grounds and drives.

(Afternoon)

Wipe lube equipment; clean eave and interior lights; sweep and oil floor.

Friday (Morning)

Sweep floor and wipe shelves and woodwork; clean wash room; wipe lube equipment; clean drain pit.

(Afternoon)

Polish and oil pumps; clean pump and post globes; police drives and grounds.

Saturday (Morning)

Sweep floor; clean wash room; wipe off pumps; police drives.

(Afternoon)

Wipe lube equipment.

Each shift also has certain fixed duties. The morning crew inspects all lights and orders for replacement of bulbs and globes are turned in to the superintendent. The afternoon shift is to inspect, clean and oil where necessary, the air compressor, air standards, grease and spray guns, tools and all equipment.

Attendants are to change uniforms at least once a week. If a man works Sundays he changes at 1 p. m., and the others come on duty Monday morning with fresh uniforms. If the clothing becomes badly soiled during the week changes are to be when necessary.

These instruction work schedules are printed on heavy cardboard and posted at the stations.

* * *

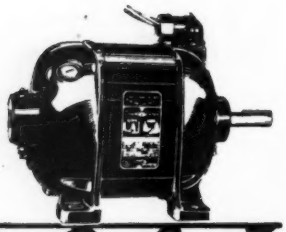
Minnows Are Good Line For Mississippi Station

The fishing season brings additional profits for the 555 One-Stop Service station at Greenville, Miss. Gold fish minnows is a line that moves well in this season.

The common variety of minnow sold around Greenville is not entirely satisfactory for fishing purposes. Its span of life is too uncertain between the time it is sold and being put to work. But the gold fish variety of minnows is reputed to be excellent for fishing.

These gold fish minnows are purchased from a hatchery. At the station they are kept in a well built on the pump island. The well, about five feet in diameter and three feet deep, has a brick exterior and is lined with concrete.

As the station is open 24 hours fishermen have come to depend upon it for a supply of minnows before starting fishing trips to the lakes. The minnows sell for 5 cents each. Last year the station sold between 8000 and 9000 minnows.



8 YEARS

LELAND LEADS IN MORE WAYS THAN ONE

The first approved vapor-resisting motor for the dispensing of gasoline was a Leland motor. This was about seven years ago.

The most universally used motor in that particular field today is the Leland motor of this type—about 300,000 in service.

This member of the Leland line has held its position of leadership against all competition for eight consecutive years.

Safe beyond Underwriters requirements
Unusually sturdy and certain. Two Types—sleeve bearing and ball bearing.

A service policy equal to the best and satisfactory to you, covering replacement and new stock.

A. C. Repulsion Induction
D. C. Compound Wound
A. C. Polyphase
Interchangeable frames

The Leland Electric Co.
Dayton · Ohio · U·S·A

Leland Electric Canada, Ltd., 7-9 Duke St., Toronto, Ont., Can.

Cable address: "Lelect" Dayton

Leland
Vapor·Resisting
Motors

New Stations Building

Note: Material used in this column is taken principally from newspapers. NATIONAL PETROLEUM NEWS assumes no responsibility for its accuracy. Headquarters of companies and addresses of individuals are given wherever possible.

The list as published from week to week cannot be looked upon as indicative of the relative extent to which stations are being built in various parts of the country.

Service Stations

Crosby, Minn.—Sinclair Refining Co., 45 Nassau St., New York, N. Y.

Madison, Wis. — Blackhawk Oil & Fuel Co.

Stevens Point, Wis.—Central Wisconsin Oil and Grease Co.

St. Paul, Minn.—Peter J. Stoffels, 1199 N. Snelling Ave.

Grant, Neb.—Grant Co-op Oil Co.

Anthon, Ia.—Marathon Oil Co.

Muscatine, Ia.—Continental Oil Co., Ponca City, Okla.

Iowa City, Ia.—J. K. Duncan.

Osage, Ia.—Continental Oil Co., Ponca City, Okla.

St. Paul, Minn.—White Eagle Oil Co., Kansas City, Mo.

Mahnomen, Minn.—John K. Rumreich.

Moorehead, Minn.—The Texas Co., 1212 Northwestern Bank Bldg., Minneapolis, Minn.

Bunker Hill, Ill.—Phillips Petroleum Co., Phillips Bldg., Bartlesville, Okla.

Morgan, Minn.—Scenic City Co-op Oil Co., Redwood Falls.

Truman, Minn.—Martin Carsten.

Grant, Neb.—Grant Co-operative Oil Co.

Fremont, Neb.—Continental Oil Co., Ponca City, Okla.

Missouri Valley, Ia.—H. T. Faith.

Dubuque, Ia.—Belosky Motor Co.

Mitchell, S. D.—Sherwood Petroleum Co.

Durand, Wis.—Henry Hartung.

Durand, Wis.—Durand Oil Co.

Durand, Wis.—Golden Rule Oil Co., 120 W. 1st St., Wichita, Kan.

Mason City, Ia.—White Eagle Oil Co., 1400 Federal Reserve Bank Bldg., Kansas City, Mo.

Antigo, Wis.—White Eagle Oil Co., 1400 Federal Reserve Bank Bldg., Kansas City, Mo.

Bruceton, Tenn.—Charley Parks, McKenzie, Tenn.

Galva, Ill.—Central Oil & Greasing Co.

Streator, Ill.—V. F. Keen.

Jacksonville, Ill.—William LeTissier.

Fairmount, Ind.—Harry Winslow.

Wayne, Neb.—Deep Rock Oil Co., 424 S. Cheyenne Ave., Tulsa, Okla.

Hancock, Wis.—Shell Petroleum Co., Shell Bldg., St. Louis, Mo.

Casey, Ill.—W. C. Turner and Charles F. Beavers, Alabama & Central Aves.

Sebewaing, Mich.—J. E. Wurm & Co.

Bay Port, Mich.—Scenic Oil Co.

Pigeon, Mich.—Scenic Oil Co.

Hudson, Wis. — Phillips Petroleum Co., Phillips Bldg., Bartlesville, Okla.

St. Paul, Mo.—C. H. Biron, 306 Globe Bldg.

Holland, Ia.—Farmers Union.

Burt, Ia.—John Gettman.

Decorah, Ia.—W. H. Gilson.

Burt, Ia.—Martin Greiss.

Omaha, Neb.—Frank Coppola, 811 S. 38th St.

Letters to the Editor

YOUR articles by the "Two Gallon Buyer" have given me a lot of amusement and very interesting reading. I get a big kick out of them, particularly, the article written by the service station attendant in your Feb. 11 issue. Hats off to him.

Reading this article I am somewhat reminded of reading a story some time ago when a court was trying a case and the two opposing attorneys got into a very heated argument before the judge. One attorney called the opposing attorney a "Liar" and the other one got up and said, "If you don't take that back I'll knock your d— head off," just then the judge wrapped on his desk with the gavel, and said, "Gentlemen, since you two men have told the court what you are, we will now proceed with the case."

In the first place, I am a very small jobber, or in plain words, so to speak, a small toad in a large puddle, the oil marketing field. I have spent 15 years in the sales department of two major companies and the last five years in the interest of myself as jobber in the oil business, taking my turn as station attendant as well as executive of the entire business, and am, therefore, in a very stragetic point to give my views of the two gallon buyer or any other angle of the business.

The biggest asset to a service station attendant in my estimation, is his personality. If he has a pleasing and inviting personality, he has acquired 85 per cent of his points. He must be at all times alert and very observant.

If another customer drives in before he is through with the one he is serving. Speak to him. Say, "How do you do," or if out of reach, nod your head, as if speaking to him. This will show he is recognized, and feels more at home, and the wait will not seem nearly so long. Always be neat in your work, what I mean, not sloppy, avoid spilling gasoline or even let nozzle drip on car or oil drops on any part of car.

Don't slam hood down, but instead, let hood down gently and quietly and see that the hood is fastened properly. I drive a Packard car and they have a peculiar fastener and about half of the service station attendants fasten it improperly and the result is I have to stop on the highway somewhere, unhook the fasteners, lift the hood, and straighten out the fastener, let hood down and fasten fastener properly and then proceed. This also happens with the so-called schooled attendants of the major companies.

Above all give smiling, snappy and speedy service, and be courteous at all times even when terrible busy, I could stress a lot more on this subject, that is, from different angles, but space and time does not permit it, but your biggest asset is your pleasing personality.

Getting back to the "Two Gallon Buyer" I agree with the service station attendant, that a two gallon buyer is just a two gallon buyer and no more, of course, there are exceptions, but these are in a minority. The reason he is in your station buying two gallons is because the other station or your competitor does not want him and I don't want him and of course, actions speak louder than words, and the two gallon buyer soon finds it out.

I'LL take the five, 10 and 15 gallon fills every time for my choice. My experience has been that many a time a two gallon buyer has kept a ten gallon buyer away, particularly at a station where it is taxed to almost capacity.

If a station is not doing very much volume and has time to fool with them, it is a different proposition, but at the same the attendant is retarding his own progress or its station progress along lines of the larger fill customers.

As a rule the two gallon buyer has a dilapidated "fliver," tires half inflated on account of old worn out tires, and if you inflated them to their proper pressure every one would blow out, the radiator leaking water about as fast as you poured it in, and old mother earth splattered all over the body, on account of not having a bath since its birth.

Suddenly, a nice new car drives in on the other drive, spic and span, and the owner takes great pride in keeping it looking nice, and he sees this dilapidated "flivver" can's get started due to no fault of gasoline and oil, what do you suppose *he* thinks of the situation?

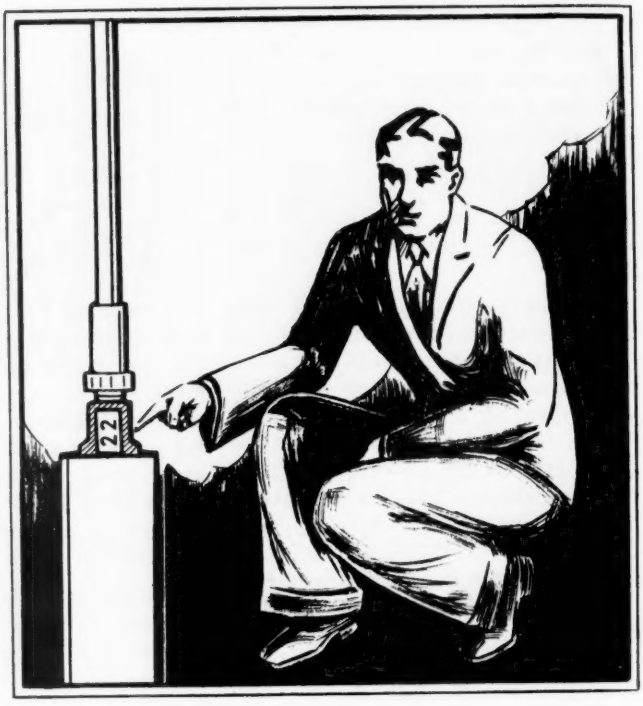
On the other hand suppose a nice new car was standing in the drive, just as he drove in, in place of the dilapidated one. Maybe both know each other and a conversation immediately ensued, see what you did, you are holding both customers more closely to you, making it more difficult to take them away from you. At the same time developing a class of trade that is whole lot more profitable than the two gallon buyer.

THE time is not far distant when the better class of trade will divorce itself from the service station that is catering or paying as much attention to a two gallon buyer than to the other class. In fact, it is shaping toward that direction at the present time.

Another item, in the way of service, I think is much overdone, and that is wiping off the windshield. I approve of it, however, but I believe that attendant should use judgment, if there is a car waiting for him, in this case, I believe the car should be passed up.

A large oil company of national fame has a $16,000 service station across the street from mine and they don't let a car out of there unless the windshield is wiped. Quite often I benefit by it due to the fact that customers often are unable to wait for this service and quite often condemn this practice and

"Say--there's some sense to gauging a tank with the *quick accurate automatic* SIMPLEX TANK GAUGE"



Simplex Features and Facts

Purely mechanical in operation . . . simple and direct. Accurate to 1/32 of an inch.

Eliminates ladders, runways and sticks. Readings are taken at a window located close to the ground. Reduces fire hazard.

Works equally well on horizontal and vertical tanks. Accurate and unfailing in measuring both gasoline and "lub" oils.

Steel Tape . . . resistant to acids . . . non-corrosive. Float is not subject to breakage, insiduous leaks or changes in pressure. Doesn't require skilled man to install.

No ladders to climb . . no tanks to open . . no "sticks" to juggle . . with the Simplex Tank Gauge. Just step up to the side of the tank . . raise a slide . . there is your tank reading in a JIFFY . . and accurate to 1/32 of an inch.

Pays for itself in the time it saves and in the prevention of evaporation losses. Practically eliminates bulk plant losses. Easier and far less costly to install than customary ladders and runways.

Priced so low that the smallest bulk plant operator can't afford to be without them. Write today for FREE Folder and Prices.

Tested and Approved by America's Largest Manufacturers of Rotary Pumps.

SIMPLEX TANK GAUGE DIVISION

Viking Pump Company, Cedar Falls, Iowa

my investment is less than $2500.

There is a question in my mind whether or not the public really expects this service, of course, there are some motorists that expect the world with the fence around it, but not the general run of the motorists. If an executive or a sales manager could don coveralls and stay on the firing line he would have a different conception of the whole situation.

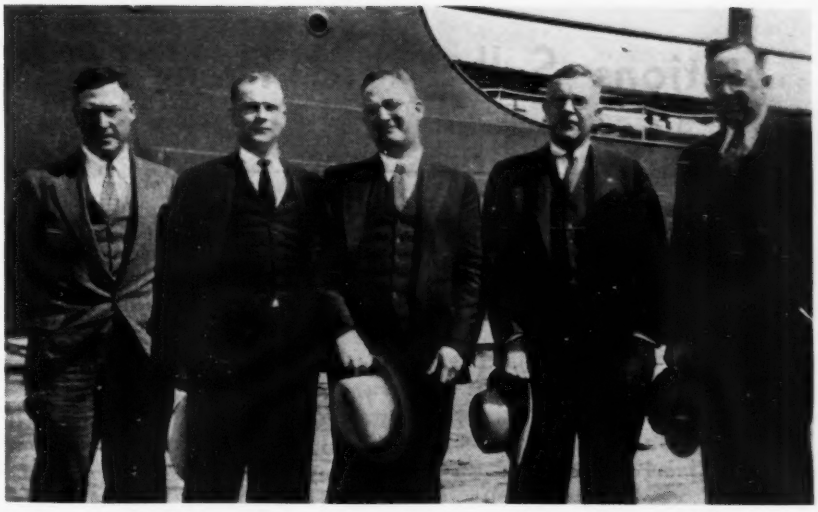
There is one more thing I like to bring out and that is the major companies strong sales argument in getting the motoring public to use their products on account, they can buy it here or in any state, or in other words the gasoline is the same here as elsewhere. I used to believe that but no more.

Just because the name of the company is the same as elsewhere is no sign the product is uniform. Isn't it a fact, the larger the oil company the more refineries this company has, and each gasoline is different just as the milk is different from two cows?

Each refinery has its adjacent territory and deals with different crude and consequently the difference in quality. In other words I used to buy my gasoline from a major company and at times they shipped from different refineries and the gasoline was without uniformity. Don't let the big bugs kid the motoring public. Combat it. Working with wonderful success.

If your business is paying a 75% on capital investment, you cannot kick. Mine is and I am not kicking.

A. C. Gienapp, Manager
Gienapp Oil Co.,
Fort Dodge, Ia.



When a cargo of gasoline was brought to east Florida by an independent refiner. Left to right: Captain Jenkins of the tanker Rawleigh Warner; O. S. Deming, Deming Service Stations, retail distributor; Capt. H. A. Sabiston, manager Atlanta plant for Deepwater; C. D. Campbell, Deepwater southeastern sales manager; and L. F. Rothermel, vice president of Deepwater

Independent Refiner Enters East Florida Market

JACKSONVILLE, Fla.

THE eastern portion of Florida, long the stronghold of major companies on account of high freight rates from the inland refineries, has been entered by an Independent.

Deepwater Oil Refineries, Inc., Houston, has leased a marine terminal in Jacksonville to serve the East coast.

Gasoline and motor oil will be brought to the Jacksonville terminal in chartered tankers from Deepwater's refinery on the ship canal at Houston, Texas. The first shipment was made in April by the tanker Rawleigh Warner.

Deepwater products will be distributed in Florida and southern Georgia by independent marketers, including the Deming Service stations in Jacksonville.

Marine facilities were obtained in Jacksonville by taking a long term lease on a storage plant previously operated by turpentine interests. The plant has a storage capacity of 2,000,000 gallons.

The Jacksonville terminal is under the charge of C. D. Campbell, southeastern district sales manager for Deepwater. L. W. Smith is the plant manager.

The marine terminal in Jacksonville operated by Deepwater Oil Refineries

Stations Sell More Than Tire, Battery Stores and Garages

THE gasoline service station takes a bigger portion of the automobile owner's service dollar than the tire and battery store and/or the garage together in many cities. This is shown in the preliminary retail reports on 53 cities of the 1930 census of distribution conducted by the U. S. Department of Commerce.

In 50 cities, where the census figures were analyzed tire stores ranked first in three, second in 48, and third in two, while gasoline stations ranked second only three times. Garages were poor thirds except in two cities where they ranked second. Net sales for garages included charges for labor and storage as well as replacement parts and gasoline and oil.

The average sales over the year for service station in various cities showed considerable variation. Fort Worth, for instance, sold $3,436,000 worth of merchandise through 217 service stations, an average of less than $16,000 per station. Both Cincinnati and Detroit reported average sales per station slightly above $27,000.

In Tulsa the average sale per station was about $18,300, then up to $19,500 in Jacksonville, Fla., $23,400 in Milwaukee, and the peak of eight larger cities was $33,600 in Baltimore,

With only 97 more service stations reported than Atlanta, Baltimore sold more than 2½ times more merchandise. Baltimore is about three times as large as Atlanta, population figures being based on the 1930 census.

Tulsa, with its claim of the oil capital of the world, kept faith with the industry by patronizing service stations to the extent of $25 for each man, woman and child. Jacksonville, Fla., also ranks along with Tulsa in the $25 per year per capita class.

Other cities, of the larger ones in the report, that were liberal at service stations were Detroit $22, Fort Worth $21, and Milwaukee $20. The lowest per capita expenditure was in Baltimore, $12.80 a year. Atlanta's sales per capita were $14.50.

Sales of new and used cars took the biggest portion of the dollar spent for automobiles and services.

Preliminary reports of the business census for the 53 cities are given below.

How the Motorist Spends His Automobile Dollar

From U. S. Department of Commerce Preliminary Report of Retail Distribution Census for 1929

City	Population	Net Sales Automotive Group	Sales of New & Used Autos	No. of New & Used Car Sales Places	Sales at Service Stations	Number of Service Stations	Sales of Accessories, Tires & Batteries	No. of Tire & Accessory Stores	Sales at Garages: Tires Gas & Oil	Number of Garages
Atlanta, Ga.	270,366	$30,235,156	$20,060,661	37	$3,930,265	210	$4,282,827	75	$1,793,145	127
Baltimore, Md.	804,874	49,897,579	31,368,860	111	10,315,611	307	5,327,928	193	2,658,118	179
Baton Rouge, La.	30,729	5,427,971	4,317,548	15	662,073	13	337,626	6	110,724	11
Bay City, Mich.	47,355	6,119,890	4,306,148	22	1,234,116	52	368,322	19	211,304	21
Bismarck, N. Dak.	11,090	2,823,198	2,236,261	11	220,178	7	237,147	6	129,612	14
Burlington, Vt.	24,789	3,955,183	3,089,779	15	299,692	3	365,271	10	200,441	8
Charleston, S. C.	62,265	4,710,985	3,440,704	14	586,637	25	452,181	10	185,531	17
Charlotte, N. C.	82,675	9,194,041	4,725,723	16	2,840,402	85	1,216,806	14	368,482	30
Chattanooga, Tenn.	119,798	11,158,220	6,826,802	25	1,878,968	85	1,663,350	24	721,643	39
Cincinnati, Ohio.	451,160	40,565,785	25,441,735	91	8,001,009	296	4,290,933	126	2,401,963	188
Cleveland, Ohio.	900,429	86,262,520	49,178,481	163	24,096,615	768	8,135,079	287	4,587,134	279
Columbia, S. C.	50,211	6,956,008	4,612,937	19	1,362,209	47	544,143	17	427,594	29
Columbus, Ohio.	290,564	30,317,903	18,190,853	61	7,428,865	308	2,773,462	102	1,834,242	158
Cumberland, Md.	37,747	4,174,776	2,754,647	22	675,100	26	598,750	17	112,424	12
Dallas, Tex.	260,475	36,111,715	23,340,373	79	7,643,911	333	2,544,244	59	2,397,369	152
Detroit, Mich.	1,568,662	154,956,395	101,714,142	269	34,712,006	1,264	10,172,102	279	7,295,189	249
Evansville, Ind.	102,249	8,663,642	5,436,960	30	1,576,996	93	1,046,322	42	592,549	50
Flint, Mich.	156,492	21,324,131	14,308,366	56	4,355,713	158	1,834,654	38	787,349	47
Fort Smith, Ark.	31,429	4,431,210	2,760,422	14	785,614	55	629,760	14	236,532	27
Fort Wayne, Ind.	114,946	16,713,596	11,758,359	36	2,671,320	120	1,619,271	34	582,545	39
Fort Worth, Tex.	163,447	21,099,332	12,606,672	37	3,436,004	217	2,532,825	43	2,463,673	100
Fremont, Neb.	11,407	2,041,025	1,206,728	11	549,583	20	208,044	8	76,670	11
Grand Forks, N. Dak.	17,112	3,250,247	2,546,646	14	512,256	18	191,345	7	.....	..
High Point, N. C.	36,745	2,704,472	1,860,838	12	566,326	43	247,375	10	29,933	410
Huntington, W. Va.	75,572	6,595,430	4,222,635	19	1,250,664	67	748,309	18	329,245	23
Indianapolis, Ind.	364,161	42,326,052	26,879,566	71	8,743,327	392	3,882,446	112	2,726,088	188
Jackson, Tenn.	22,172	2,381,455	1,954,678	9	294,528	12	.....	..	96,749	13
Jacksonville, Fla.	129,549	11,695,757	5,766,586	26	3,325,522	167	1,741,056	43	763,977	55
Joliet, Ill.	42,993	7,655,683	5,322,608	25	1,367,351	65	532,911	30	432,813	24
Kalamazoo, Mich.	54,786	10,486,488	7,483,942	36	1,724,671	63	730,625	28	504,000	28
Lawton, Okla.	12,121	2,911,364	2,041,575	12	596,155	34	169,026	9	104,608	14
Little Rock, Ark.	81,679	11,532,785	7,750,391	24	2,479,519	90	704,320	14	304,938	34
Macon, Ga.	53,829	5,401,916	3,587,703	13	835,254	34	617,132	16	326,064	21
Madison, Wis.	57,899	8,006,635	4,388,418	22	2,046,387	65	908,275	34	641,644	37
Miami, Fla.	110,637	16,097,198	9,421,853	53	4,242,265	247	1,490,551	46	769,826	111
Milwaukee, Wis.	578,249	55,691,601	36,477,864	184	10,839,055	465	4,637,311	108	3,352,208	220
Minot, N. Dak.	16,099	4,693,846	3,680,495	13	584,325	22	181,555	4	235,263	9
Mitchell, S. Dak.	10,942	2,800,261	1,853,738	9	646,007	17	122,799	6	177,717	9
New Haven, Conn.	162,655	18,712,229	12,793,794	40	2,446,433	104	1,981,150	45	1,428,735	137
New Orleans, La.	458,762	22,345,422	14,033,821	36	3,385,310	224	2,603,189	59	2,258,130	108
Norfolk, Va.	129,710	10,841,464	7,261,310	23	1,558,843	114	1,348,919	24	466,412	46
Pensacola, Fla.	31,579	3,636,719	2,622,499	12	427,149	19	413,179	15	120,034	13
Pine Bluff, Ark.	20,760	3,356,754	2,285,169	12	854,684	37	63,917	4	127,317	6
Racine, Wis.	67,542	7,015,799	4,740,258	29	1,663,366	68	351,925	21	193,461	23
Richmond, Va.	182,929	16,933,989	9,986,822	32	3,679,603	147	2,022,753	28	1,123,914	66
San Antonio, Tex.	231,542	30,238,387	21,398,636	46	4,482,974	319	2,258,190	40	1,849,000	122
Sapulpa, Okla.	10,533	2,212,479	1,621,785	13	265,863	32	207,734	18	111,500	7
Savannah, Ga.	85,024	5,792,034	3,664,954	12	975,517	58	542,846	26	561,287	37
Shreveport, La.	76,655	9,267,728	5,584,106	18	1,563,891	105	1,562,666	22	512,650	51
Skagit Cty., Wash.	35,142	3,223,000	2,062,000	23	523,000	63	638,000	50	.....	..
Tampa, Fla.	101,161	10,924,591	6,486,550	31	2,504,937	169	1,296,704	38	584,840	56
Tulsa, Okla.	141,258	23,267,304	15,344,777	39	3,579,897	195	3,221,513	45	902,092	59
Washington, D. C.	486,869	50,215,080	31,856,178	83	11,471,171	254	3,846,789	120	2,813,384	106
Waukegan, Ill.	33,499	5,512,038	3,897,023	17	746,046	37	394,747	15	83,648	15
Wheeling, W. Va.	61,659	7,340,120	3,994,439	21	2,187,852	46	682,663	19	455,325	33
Winston-Salem, N. C.	75,274	7,164,779	4,606,350	18	1,288,464	38	974,700	12	280,057	22

On The Lazy Bench

Do You Know Dora?

When they told her that there was an effort being made to revive Shakespeare, she said:

"Oh was he at the party, too?"

—The Gas Line
West Penn Oil Co.

* * *

"Still" Am Is Right

Rastus (stumbling upstairs at 3 a. m.): "De old gray mare she ain't what she used to be."

Mandy (coldly): "But de old white mule still am."

—Pure Oil News
The Pure Oil Co.

* * *

Flew right over that Texas oil field that has made oil so cheap that it's cheaper to strike a dry hole.

—Will Rogers

* * *

They had to carry Carrie to the ferry,
The ferry carried Carrie to the shore,
The reason that they had to carry Carrie
Was that Carrie couldn't carry any more.

—The Gas Line
West Penn Oil Co.

* * *

Beauty Hint

A beautiful dimple may be acquired by simply sleeping on a collar button.

* * *

"Where'd you get that black eye?"

"I kissed the bride."

"But I thought that was the custom!"

"Not two months after the ceremony, it isn't."

—The Arknatco
Louisiana Oil Refining Co.
and Arkansas Natural Gas Co.

* * *

Statistics show that if you will only save $5 a week for one year, you'll spend it all at Christmas anyway.

—Union Oil Bulletin
Union Oil Co. of California

* * *

Teacher: Who was the man who never told a lie?

1931 Pupil: Ah, who indeed?

* * *

Questions and Answers

Dear Doctor: What should I take when I am run down?

Reply: The license number.

—Pure Oil News
The Pure Oil Co.

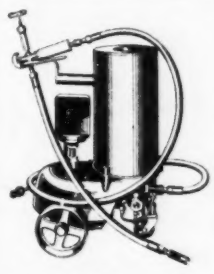
—brings your customers back

An Ottawa Lift makes steady, satisfied customers out of the "drop in" trade. The wide, easy-to-drive-on runways urge the most timid of drivers to get that grease job now . . . brings them back again and again . . . increases your gallonage and profits.

FIVE MODELS

Ottawa offers you five models to choose from—either free-wheel or drive-on type—full hydraulic and semi-hydraulic operation. One of them is particularly suited to your station requirements.

Get full details of Ottawa's many super-service features. Just write . . . your name will bring full particulars.



OTTAWA ALL ELECTRIC
Grease Gun—Model E
A Ruggedly built gun, simple in design and operation, with many superior features.

O T T A W A M F G . C O .
"Machinery Builders for 30 years"
242 Fuller Street
Ottawa, Kansas

OTTAWA LIFT

BENZOL

HYDROCARBON PRODUCTS COMPANY
Incorporated
117 LIBERTY STREET
NEW YORK

GRUELLING FIELD TESTS PROVE BENNETT SUPERIORITY

STANDARD BENNETT PISTON DISPLACEMENT PUMPS CARRY OFF HONORS IN FOUR MAJOR OIL COMPANIES' 500,000 GALLON OPERATING TESTS

Perfect Score Conclusive Evidence of Sound Engineering and Dependable Performance

Stellar honors were won by the standard Bennett Piston Displacement Metering Gasoline Pumps entered in recent field tests sponsored by four major oil companies. From start to finish the Bennett Pumps gave visible evidence of the advanced engineering and precision construction that has placed them on duty in busiest service stations from coast to coast.

At the finish of the tests the Bennett entries were still in excellent operating condition — capable of pumping thousands of gallons more without service interruptions, and at a remarkably low operating cost.

If you want a Piston Displacement Metering Gasoline Pump that has stood every test of accuracy, efficiency, dependability and economy by all means get the facts on the Bennett line.

WRITE for Displacement Meter Pump BULLETIN.

WRITE for Displacement Meter Pump *BULLETIN*

QUALITY BUILT Bennett Dispensing Equipment FOR PETROLEUM PRODUCTS

SERVICE STATION EQUIPMENT COMPANY

Manufacturers of "Bennett"—"Eco"—"John Wood" Products: Everything for Filling Stations

MAIN OFFICE—CONSHOHOCKEN, PA. (Suburb of Philadelphia)
Branch Offices and Warehouses in Principal Cities throughout United States and Canada
PACIFIC COAST—Rheem Mfg. Co. — Division of Service Station Equipment Co.
FOREIGN DIVISION, 32 Broadway, New York

ATLANTA—101 Marietta Street Bldg.
BALTIMORE—1002 American Bldg.
CALGARY—605 Eleventh Avenue, W.
CHICAGO—910 S. Michigan Avenue
CLEVELAND—5305 Sweeney Avenue
DALLAS—947 S. Lamar Street
LOS ANGELES—Rheem Mfg. Co., 4361 Firestone Blvd.
NEW YORK—32 Broadway
PITTSBURGH—304 Koppers Bldg.
EMERYVILLE, CALIF.—Rheem Mfg. Co., 4535 Horton Street
ST. LOUIS—1405 Ambassador Bldg.
SEATTLE—Rheem Mfg. Co.,
TORONTO—101 Hanson Street
VANCOUVER, B. C.—324 Hornby Street
WINNIPEG—1021 Winnipeg Avenue

Crude Production by Fields

By Telegraph—Daily average gross output, by fields in U. S., for week ending with dates below as compiled by A. P. I.

PRODUCTION SUMMARY

	May 16	May 9
Production east of Rockies	1,890,800	1,930,400
Decrease		39,600
Total production in U. S.	2,4266,800	2,468,700
Decrease		41,900
Crude oil imports	147,145	110,715
Increase		36,430
Total new crude supply	2,573,945	2,579,415
Decrease		5,470

OKLAHOMA

	May 16	May 9
Allen Dome	10,500	11,750
Asher	650	650
Asher, West	7,050	7,000
Blackwell	2,900	2,900
Bowlegs	14,700	14,450
Braman	1,900	1,900
Bristow-Slick	12,400	12,250
Burbank	13,500	13,200
Carr City	13,450	11,400
Cromwell	5,250	5,250
Cushing	13,200	13,200
Davenport	950	900
Duncan Dist.	6,250	6,250
Earlsboro	19,300	19,050
Earlsboro, East	19,400	14,600
Earlsboro, So.	6,550	6,450
Garber	4,050	4,050
Graham	4,150	4,150
Healdton	10,850	10,850
Hewitt	6,100	6,100
Hubbard	950	950
Konawa	11,250	9,400
Little River	26,700	25,550
Little River, E.	5,000	5,950
Logan Co.	3,600	3,650
Maud	2,750	2,350
Mission	10,550	7,450
Oklahoma City	173,600	222,200
Okmulgee, No.	9,150	9,150
Okmulgee, So.	4,950	4,950
Osage (Outside Burbank)	21,250	21,200
Papoose	2,150	2,150
Pearson	700	550
Sasakwa	2,300	2,500
St. Louis	23,400	20,400
Scholem-Alechem	13,200	13,250
Searight	4,050	4,250
Seminole	14,400	13,300
Seminole, East	1,700	1,450
Thomas	600	600
Tonkawa	6,200	6,200
Wewoka	9,200	8,950
Yale-Jennings	6,050	6,100
Others	47,250	48,000
Total, Okla.	574,050	607,850
Decrease		33,800

KANSAS

	May 16	May 9
Augusta-Fox Bush	2,900	2,900
Churchill	3,550	3,050
El Dorado-Towanda	12,550	12,550
Florence-Covert	800	750
Greenwood Co.	15,900	15,850
Oxford	2,150	2,150
Peabody-Elbing	1,900	1,900
Rainbow Bend.	1,450	1,450
Ritz	5,700	6,650
Russell	3,200	3,200
Sedgwick Co.	17,650	17,650
Voshell	17,850	17,650
Others	22,700	22,850
Total, Kans.	107,800	108,600
Decrease		800

NORTH LOUISIANA

	May 16	May 9
Caddo, light	7,250	7,350
Caddo, heavy	2,750	2,800
Cotton Valley	1,850	1,850
De Soto and River	2,700	2,700
Haynesville	5,700	5,700
Holly	550	550
Homer	3,250	3,250
Sarepta		
Carterville	1,200	1,250
Urania	4,550	4,500
Zwolle	8,500	8,350
Others	1,500	1,500
Total, N. La.	39,800	39,800

ARKANSAS

	May 16	May 9
Champagnolle	3,000	2,950
El Dorado	3,650	3,650
Lisbon	700	750
Nevada	1,000	1,000
Smackover, light	4,250	4,250
Smackover, heavy	31,500	31,600
Stephens	850	850
Others	1,800	1,900
Total, Ark.	46,750	46,950
Decrease		200

ROCKY MOUNTAIN

Wyoming

	May 16	May 9
Big Muddy	1,900	1,900
Elk Basin	650	700
Grass Creek	2,100	1,950
Labarge	1,350	1,000
Lance Creek	200	200
Lost Soldier	4,400	4,000
Oregon Basin	1,400	1,400
Rock River	1,950	1,950
Salt Creek	25,100	24,450
Others	3,750	3,850
Total, Wyo.	42,800	41,400
Increase		1,400

Montana

	May 16	May 9
Cat Creek	1,100	1,050
Pondera	1,600	1,550
Sunburst	4,400	4,400
Others	1,350	1,400
Total, Mont.	8,450	8,400
Increase		50

Colorado

	May 16	May 9
Florence	350	350
Fort Collins	1,100	1,000
Moffat (Craig)	1,000	900
Others	1,700	1,700
Total, Colo.	4,150	3,950
Increase		200

New Mexico

	May 16	May 9
Artesia	500	550
Bal. Eddy Co.	200	400
Hobbs High	36,600	31,500
Bal. Lea Co.	4,500	4,200
Hogback	450	450
Rattlesnake	1,050	1,100
Table Mesa	100	100
Total, N. M.	43,400	38,300
Increase		5,100
Total, Rocky Mountain	98,800	92,050
Increase		6,750

TEXAS (OUTSIDE GULF COAST)

Panhandle District

	May 16	May 9
Carson Co.	4,750	4,400
Gray Co.	45,300	41,950
Hutchinson Co.	9,100	8,300
Wheeler Co.	200	200
Others	1,900	850
Total Panhandle Tex.	61,250	55,700
Increase		5,550

North Texas

	May 16	May 9
Archer Co.	12,050	11,850
Burkburnett	6,400	6,500
Electra	9,100	8,900
Iowa Park and K. M. A.	3,550	3,750
Montague-Cooke	5,300	5,300
Wilbarger	9,050	10,350
Young Co., No.	10,300	9,750
Others	1,200	1,200
Total, N. Tex.	56,950	57,600
Decrease		650

West Central Texas

	May 16	May 9
Brown Co.	3,500	3,500
Callahan Co.	2,300	2,300
Coleman Co.	1,950	1,800
Eastland-Desdemona	3,700	3,700
Jack Co.	1,150	1,100
Palo Pinto Co.	350	350
Shackleford Co.	3,750	3,750
Stephens Co.	4,500	4,500
Throckmorton County	350	350
Young Co., So.	3,300	3,300
Others	900	900
Total, West Cen. Texas	25,750	25,550
Increase		200

West Texas

	May 16	May 9
Crane and Upton Cos.	23,900	24,200
Crockett Co.	1,700	1,750
Ector Co.	6,900	7,000
Howard Co.	29,000	29,250
Jones Co.	1,400	1,400
Michell and Scurry Cos.	1,900	2,000
Reagan Co.	18,350	19,400
Winkler Co.	44,350	44,950
Yates	68,900	70,900
Bal. Pecos County	3,950	4,600
Others	7,100	7,150
Total, West Texas	207,450	212,600
Decrease		5,150

East Central Texas

	May 16	May 9
Boggy Creek	1,900	2,000
Corsicana-Powell	4,550	4,550
Currie	300	300
Mexia	3,400	3,400
Nigger Creek	150	150
Richland	100	100
Van Zandt	44,950	43,650
Wortham	500	550
Others	50	50
Total, E. Cen. Texas	55,900	54,750
Increase		1,150

East Texas

	May 16	May 9
Rusk County:		
Joiner field	92,500	95,750
Kilgore	116,400	120,900
Gregg County:		
Longview	48,550	52,250
Total, E. Texas	257,450	268,900
Decrease		11,450

Southwest Texas

	May 16	May 9
Chapmann Abbot	3,750	3,800
Dale	300	300
Darst Creek	20,150	18,650
Laredo Dist.	13,200	13,400
Luling	8,650	8,700
Lytton Spgs.	700	700
Salt Flat	12,700	11,900
Somerset	1,300	1,300
Others	250	250
Total, S. W. Texas	61,000	59,000
Increase		2,000
Total, Texas (Outside Gulf Coast)	725,750	734,100
Decrease		8,350

GULF COAST

Coastal Texas

	May 16	May 9
Barbers Hill	30,600	30,350
Batson	1,000	1,000
Big Creek	2,900	3,000
Blue Ridge	1,200	1,300
Boling	800	650
Damon Mound	1,350	1,400
Esperson	2,100	2,150
Fannett	500	450
Goose Creek	4,200	4,150
Hankamar	2,400	2,150
Hull	6,250	6,500
Humble	9,550	9,800
Moss Bluff	350	350
North Dayton	600	650
Orange Co.	1,900	1,950
Orchard	900	1,100
Pettus	7,200	7,400
Pierce Junct.	8,350	8,200
Port Neches	1,400	1,400
Raccoon Bend	8,200	8,300
Refugio Co.	30,750	31,500
Saratoga	1,050	1,000
Somerville	2,550	2,300
Sour Lake	1,900	2,200
So. Liberty	2,000	2,000
Spindletop	9,050	9,100
Sugarland	11,650	11,650
West Columbia	4,100	4,150
Others	1,800	1,850
Total, Coastal Texas	156,600	158,000
Decrease		1,400

Coastal Louisiana

	May 16	May 9
Edgerly	400	350
Evangeline	650	700
Hackberry, E.	1,700	1,800
Hackberry, Old	750	750
Lake Barre	2,150	2,200
Lockport	8,000	8,350
Port Barre	1,700	1,800
Sulphur Dome	3,000	2,450
Vinton	5,800	5,700
White Castle	2,400	2,250
Others	4,150	4,350
Total, Coastal Louisiana	30,700	30,700
Total, Gulf Coast	187,300	188,700
Decrease		1,400

CALIFORNIA

	May 16	May 9
Dominguez	11,700	11,700
Elwood-Goleta	34,400	35,500
Huntington Beach	21,900	21,000
Inglewood	15,800	15,500
Kettleman Hills	39,000	32,500
Long Beach	87,500	88,200
Midway-Sunset	52,300	55,000
Playa del Rey	30,000	29,800
Santa Fe Spgs.	72,700	73,600
Seal Beach	14,000	15,600
Ventura Ave.	43,600	46,800
Others	113,100	113,100
Total, Calif.	536,000	538,300
Decrease		2,300

EASTERN

	May 16	May 9
(Not including Mich.)	102,150	103,850
Decrease		1,700

MICHIGAN

	May 16	May 9
Mt. Pleasant	6,500	6,600
Muskegon	1,750	1,750
Saginaw	150	150
Total, Mich.	8,400	8,500
Decrease		100

Compilation Of Mid-Continent Refinery Operations

All Rights Reserved to the National Petroleum Publishing Co.

Mid-Continent Refinery Operations, Week Ended May 15 (By Telegraph)

	Kansas	Oklahoma	North & Cent. Texas	West Texas	North La.-Ark.	Total Week Ended May 15
Plants Reporting	10	23	23	10	10	76
Da. Av. Cap. (bbls.)	94,000	162,500	107,400	71,500	60,700	496,100
Da. Cracking Capacity	53,200	64,600	23,100	26,250	31,700	198,850
Da. Av. Crude Runs	56,632 — 3.2	108,443 + 0.3	58,512 + 3.4	46,134 + 18.7	43,536 + 0.3	313,257 + 2.5
Da. Av. Other Oil	3,921 — 40.8	2,379 + 7.0	1,279 + 28.3	482 — 87.2	18,463 + 4.6	26,524 + 15.2
GASOLINE—Gallons						
Stocks, May 8	27,341,000	48,765,000	31,892,000	13,814,000	4,385,000	126,197,000
Prod. 5-8 to 5-15	10,508,000 — 7.9	18,404,000 + 10.3	9,173,000 + 7.0	4,531,000 + 15.4	7,355,000 + 24.0	49,971,000 + 7.4
Ship. 5-8 to 5-15	11,264,000 — 6.4	14,991,000 — 12.9	8,985,000 — 25.1	3,133,000 — 0.7	7,257,000 + 12.7	45,630,000 —10.3
Stocks, May 15	26,585,000 — 2.8	52,178,000 + 7.0	32,080,000 + 0.6	15,212,000 + 10.1	4,483,000 + 2.2	130,538,000 + 3.4
Ratio Sales to Prod.	107.2%	81.5%	97.9%	69.1%	98.7%	91.3%
KEROSINE—Gallons						
Stocks, May 8	7,560,000	13,453,000	1,917,000	29,000	354,000	23,313,000
Prod. 5-8 to 5-15	1,569,000 — 7.2	2,282,000 — 0.9	925,000 + 22.0	....	380,000 + 18.8	5,156,000 + 1.7
Ship. 5-8 to 5-15	1,926,000 + 5.2	2,271,000 — 10.9	1,026,000 + 17.7	1,000 — 83.3	418,000 + 24.4	5,642,000 + 0.9
Stocks, May 15	7,203,000 — 4.7	13,464,000 + 0.08	1,816,000 — 5.3	28,000 — 3.4	316,000 — 10.7	22,827,000 — 2.08
Ratio Sales to Prod.	122.8%	99.5%	110.9%	.....	110.0%	109.4%
STOVE DISTILLATE—Gallons						
Stocks, May 8	699,000	5,914,000	751,000	132,000	58,000	7,554,000
Prod. 5-8 to 5-15	442,000 + 33.9	565,000 + 28.7	153,000 — 33.2	36,000 +125.0	39,000 — 26.4	1,235,000 + 15.7
Ship. 5-8 to 5-15	392,000 — 57.1	464,000 + 23,100.0	294,000 + 36.1	53,000 +211.8	39,000 — 13.3	1,242,000 + 3.8
Stocks, May 15	749,000 + 7.2	6,015,000 + 1.7	610,000 — 18.8	115,000 — 12.9	58,000	7,547,000 — 0.1
Ratio Sales to Prod.	88.7%	82.1%	192.2%	147.2%	100.0%	100.6%
GAS OIL—Gallons						
Stocks, May 8	4,231,000	32,938,000	3,184,000	4,448,000	8,406,000	53,207,000
Prod. 5-8 to 5-15	776,000 — 15.7	2,477,000 + 31.4	701,000 + 44.8	592,000 + 20.6	2,251,000 — 5.1	6,797,000 — 13.7
Ship. 5-8 to 5-15	525,000 — 5.2	559,000 — 76.7	714,000 + 41.9	302,000 + 26.9	2,313,000 — 7.8	4,413,000 — 28.9
Stocks, May 15	4,482,000 + 5.9	34,856,000 + 5.8	3,171,000 — 0.4	4,738,000 + 6.5	8,344,000 — 0.7	55,591,000 + 4.5
Ratio Sales to Prod.	67.7%	22.6%	101.9%	51.0%	102.8%	64.9%
FUEL OIL—Gallons						
Stocks, May 8	13,603,000	52,877,000	63,072,000	19,714,000	19,779,000	169,045,000
Prod. 5-8 to 5-15	4,622,000 — 5.8	6,656,000 + 6.8	5,763,000 — 1.1	7,155,000 + 22.5	4,456,000 — 4.3	28,652,000 + 4.3
Ship. 5-8 to 5-15	5,533,000 + 28.1	4,953,000 — 24.1	5,921,000 + 3.1	3,750,000 — 20.1	5,727,000 + 19.4	25,884,000 — 0.8
Stocks, May 15	12,692,000 — 6.7	54,580,000 + 3.2	62,914,000 — 0.3	23,119,000 + 17.3	18,508,000 — 6.4	171,813,000 + 1.6
Ratio Sales to Prod.	119.7%	74.4%	102.7%	52.4%	128.5%	90.3%

Gasoline Produced by Various Methods, Week Ended May 15

	Kansas	% of Total	Oklahoma	% of Total	North & Cent. Texas	% of Total	West Texas	% of Total	Louisiana-Arkansas	% of Total	Total	% of Total
Straight Run	6,151,000	58.5	12,415,000	67.5	5,547,000	60.5	4,229,000	93.3	3,370,000	45.8	31,712,000	63.5
Cracked	3,843,000	36.6	4,884,000	26.5	2,309,000	25.2	178,000	3.9	2,965,000	40.3	14,179,000	28.4
Natural	514,000	4.9	1,105,000	6.0	1,317,000	14.3	124,000	2.8	1,020,000	13.9	4,080,000	8.1
Total	10,508,000		18,404,000		9,173,000		4,531,000		7,355,000		49,971,000	

+ or — columns are % change from previous week.

Gasoline Stocks Rise at Mid-Continent Refineries

Staff Special—By Telegraph

TULSA, May 19

THE ground gained by Mid-Continent refiners the first week in May was lost the week ended May 15 when shipments fell 5,200,000 gallons and stocks increased 4,400,000 gallons.

All districts except Louisiana-Arkansas shared in the loss of business. Shipments increased 12.7 per cent over the preceding week's shipments in the Louisiana-Arkansas district.

Part of the increase in gasoline stocks was due to an increase of 7700 barrels daily average in runs of crude oil to stills. Production of gasoline for the region was increased 3,400,000 gallons over output the week before.

Kansas was the only district to draw on gasoline stocks.

Kerosine stocks were reduced when shipments increased 50,000 gallons although output rose 80,000 gallons.

Distillate stocks were virtually unchanged. Gas and fuel oil stocks rose.

Summary for the Month

Production and shipments, all reporting refineries, for four weeks ended May 15. Change in stocks figures from April 17.

GASOLINE

	Gallons
Production	194,059,000
Shipments	190,705,000
Net change in stocks	+3,354,000
Ratio sales to production	98.3%

KEROSINE

	Gallons
Production	21,720,000
Shipments	23,299,000
Net change in stocks	—1,579,000
Ratio sales to production	107.3%

STOVE DISTILLATE

	Gallons
Production	5,323,000
Shipments	5,251,000
Net change in stocks	+72,000
Ratio sales to production	98.6%

GAS OIL

	Gallons
Production	29,021,000
Shipments	19,596,000
Net change in stocks	+9,435,000
Ratio sales to production	67.5%

FUEL OIL

	Gallons
Production	110,800,000
Shipments	99,148,000
Net change in stocks	+11,652,000
Ratio sales to production	89.5%

N. P. N. Service Record

Some of the requests for information, data and advice, which were taken care of in various National Petroleum News offices in the past week are:

Rhode Island jobbing company president furnished map and data on Texas oil fields.

* * *

President of Houston refiner furnished name of official to contact, and address of refining company building plant in Texas.

* * *

Head of Iowa jobbing company advised as to possibilities of obtaining gas and oil in Iowa.

* * *

Ohio inquirer told where map of Texas oil fields may be obtained.

* * *

Traffic manager of Houston refiner and member of large southwestern pipeline company furnished price information.

* * *

New York publication furnished information on the standing of two oil promoters in Texas.

* * *

Pennsylvania inquirer furnished data on a test well in Lipscomb county, Tex.

* * *

President of Pennsylvania jobbing company furnished name and address of East Texas map company.

* * *

New oil jobber in New York furnished names and addresses of 22 oil companies who are in a position to supply a jobber in New York City.

* * *

Minnesota oil jobber furnished names of 11 smaller refiners in Mid-Continent who can supply 50-54 naphtha and U. S. Motor gasoline.

* * *

Illinois jobber told what amount railroads pay to oil tank car operators, what the practice is in contracting for gasoline hauling from refinery to bulk plant and what the law in Illinois and California prescribes on weights and sizes of truck trains for oil deliveries.

* * *

Illinois oil jobber furnished list of 25 Independent refiners operating plants in the western part of the United States, together with the headquarters addresses and plant locations; also furnished names and addresses of nine service station equipment manufacturers near Utah.

* * *

Alabama agent for large oil company told where he may buy awnings for his gasoline pumps.

* * *

Michigan oil jobber given name of manufacturer of instrument indicating the load on truck tires.

* * *

President of Alabama oil jobbing company given names and addresses of four manufacturers of gasoline pump globes.

* * *

Maine oil jobber furnished names and addresses of four East Coast refiners from whom he may be able to purchase a fuel oil of the gravity he specifies.

* * *

Minnesota oil marketing company told of seven companies in the United States marketing under the name he mentions, one of which sells its products under that name.

Not just built 'TO' Underwriters Standards

BUT BETTER

Specify 'Continental Underwriters' Hose on your new pumps, or replacements

Our nearest branch will deliver to you promptly

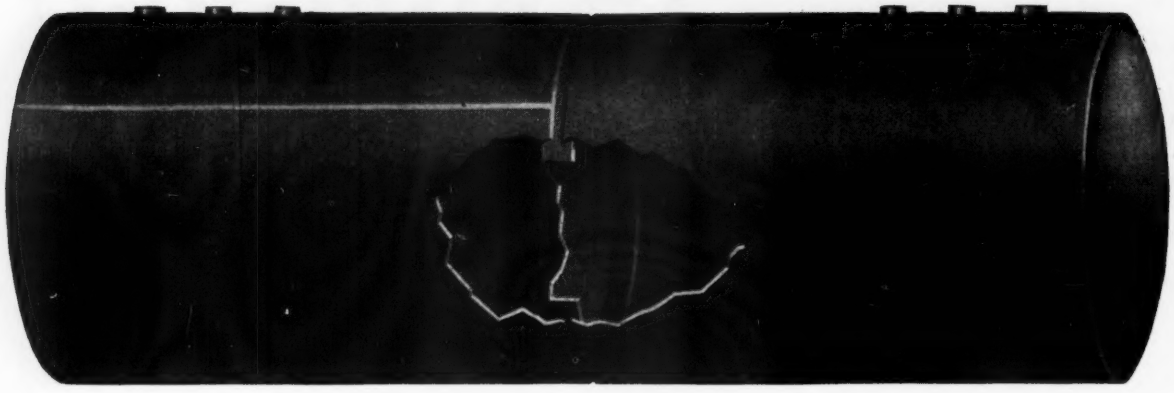
BALTIMORE, MD. ..... 112 W. Pratt St.
BOSTON, MASS. ..... 200 Congress St.
BUFFALO, N. Y. ..... 885 Niagara St.
CHICAGO, ILL. ..... 27 West Illinois St.
CLEVELAND, O. ..... 203 Perry Payne Bldg.
DAYTON, O. ..... 116 So. St. Clair St.
DETROIT, MICH. ..... 5423 12th St.
MILWAUKEE, WIS. ..... 1235 W. Atkinson Ave.
NEW YORK, N. Y. ..... 152 Chambers St.
PHILADELPHIA, PA. ..... 313-319 New St.
PITTSBURGH, PA. ..... 300 Penn Ave.
ST. LOUIS, MO. ..... 221-223 No. 3rd St.
TOLEDO, O. ..... 415 Michigan St.

Continental Rubber Works, Erie, Pa., U. S. A.

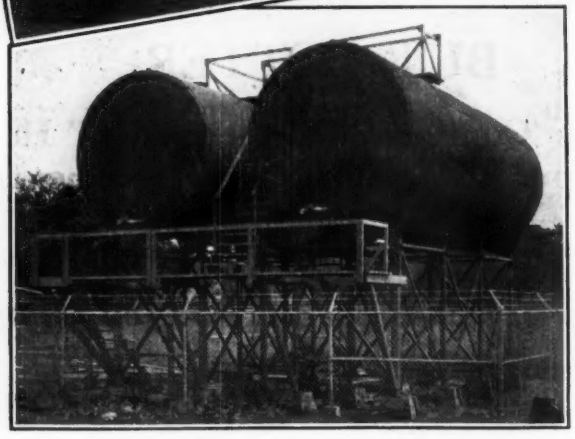
Chas. C. Kerner, 152 Chambers St., New York, N. Y.
Exclusive Foreign Representatives

TANKS OF PDM QUALITY

PITTSBURGH-DES MOINES PDM TANKS PITTSBURGH



With Outstanding Value



A battery of PDM horizontal tanks is shown at the upper left. This installation was supplied for the Public Service Production Company at Roseland, New Jersey.

Two PDM Tanks on PDM Standard steel supports, installed at Longmeadow, Mass., are shown at the lower left.

Owners and operators of service stations and bulk plants can cut excavation, freight, trucking, labor, piping and storage costs by using "Pittsburgh-Des Moines" all-welded compartment tanks. The total cost of the tank and complete installation will be much lower using one tank of two or more compartments than by using two or more separate tanks. The top view shows two sturdy, gas-tight tanks in one.

Electric welding of the center flanged head to both halves of the shell separately provides two absolutely tight tanks for different grades of fuel — it being impossible with this construction for liquid to pass from one compartment to the other.

You always get real, outstanding tank value when you buy PDM Tanks.

Other PDM Products are:

Pressure Tanks—welded or riveted
Elevated Tanks and Standpipes
A.S.M.E. Code Tanks
Underwriters Sprinkler Pressure Tanks
Underwriters Pump Compression Tanks
Pressure Gas Holders
Air Receivers
Asphalt Storage Tanks
General Steel Plate Fabrication

Do you have your copy of the new PDM Closed Tank Bulletin just off the press? Write for it today. We have your size and type of tank at an attractive price.

Pittsburgh-Des Moines Steel Company

3468 Neville Island, Pittsburgh, Pa. **Room 950, 270 Broadway Bldg., N. Y. City**

CHICAGO DES MOINES ATLANTA DALLAS

SAN FRANCISCO SEATTLE

Refinery - Tank Wagon Markets

Gasoline Trading More Active in Some Areas; Market Reports Are More Encouraging

CLEVELAND, May 18

MORE encouraging reports were heard from several of the more important refinery sections of the United States last week. Improvement in general market conditions was largely from the standpoint of activity. Tank car market prices were steadier in many areas and in some areas opinions were even ventured that the downward movement in prices had come to an end.

Retail markets remained somewhat unsettled in the Middle West and along the Pacific coast but there was considerable improvement in eastern retail markets. Prices were said to have been restored to normal levels by major companies in the New England states and the third grade of gasoline made no further headway in the east.

Motor fuel buying in the Middle West was reported on the increase. Refiners in some instances said buyers were taking out the maximum allowances specified in contracts and open market buying was along more liberal lines.

Natural gasolines, however, were the feature of trading in the Mid-Continent markets. Several large buyers entered the market late in the week and all told their purchase totaled several hundred cars. Markets were relieved of considerable surplus and prices advanced 0.125 to 0.25 cent generally.

Refined gasoline prices held their ground fairly well in the middle west. Group 3 prices for U. S. Motor gasoline ranged from 2.75 cents up. There were persistent reports of gasoline moving in large quantities at 2.50 to 2.625 cents a gallon from some sections of the Mid-Continent. Sellers admitted offering material at these prices but the fact that they refused to ship it to states where laws required that motor fuels meet U. S. Motor specifications was evidence of the fact that the lower priced offerings were not U. S. Motor gasoline.

Gasoline prices remained unchanged in the more important eastern seaboard markets and less shading of posted prices was being done by the leading distributors. Prices were reduced 0.5 to 0.75 cent in the northern and southern seaboard markets bringing them more nearly in line with the New York market.

The inquiry in cargo markets was more active particularly in intercoastal trades. A cargo of stabilized natural gasoline was sold by a Mid-Continent refiner for foreign shipment. Generally speaking, however, foreign buyers displayed but little interest in the market.

General Market Situation Unchanged at Chicago

Staff Special

CHICAGO, May 16

VIRTUALLY no change was apparent in the general market situation in Chicago in the week ended May 16. The tank car gasoline market again moved downward while retail gasoline markets remained unsettled with reductions made at numerous points.

Offering a third grade of gasoline by major marketing companies apparently has steadied the retail situation at many points, but in others even the major companies are not selling at the same price. In Chicago, the Deep Rock Oil Corp. sold its third at 7.50 cents, without tax; Sinclair's third grade was 8 cents; Standard of Indiana and the Texas Co. posted 8.25 cents and the Shell Co. offered its regular gasoline at 9.25 cents. A number of trackage stations were selling at 7 cents, without tax.

This uncertainty in the retail end was reported to be having an effect on the tank car gasoline market. Jobbers were reluctant to buy any more gasoline at a time than was necessary to keep open and in many cases were doing plenty of shopping around. Despite this, most sellers said they were having a fairly good spot demand for Motor gasoline and that shipments against contracts were holding up well.

Tank car gasoline prices moved downward again during the week but the market appeared to be steadier toward the end of the week. This was attributed partly to the better weather prevailing and also to the reports that a number of refiners in the southwest had either closed their plants or had restricted operations considerably.

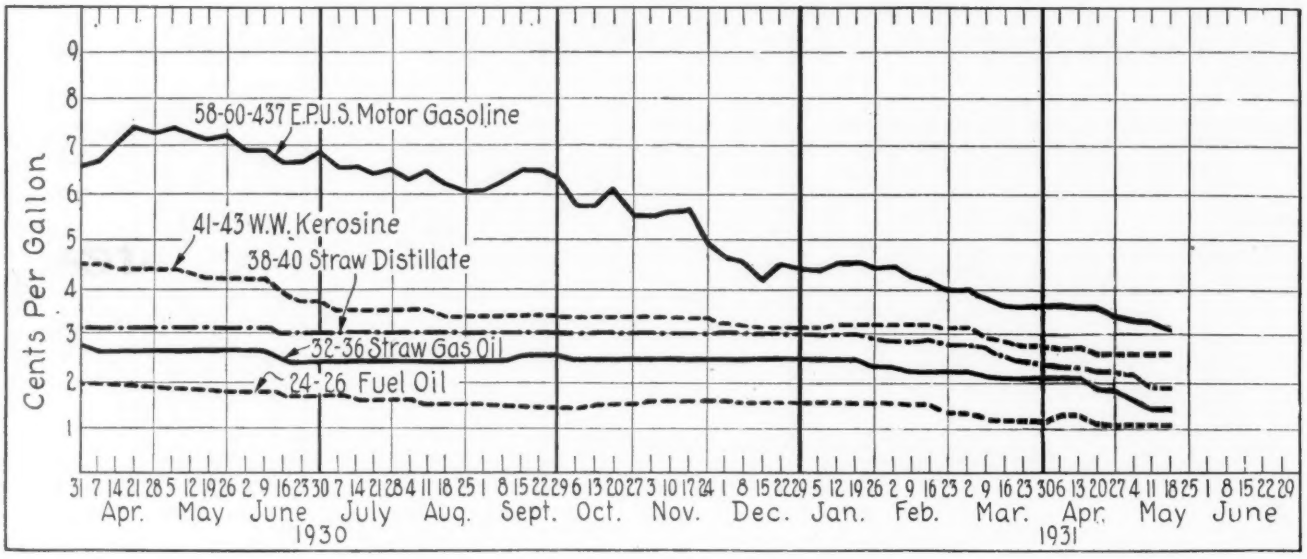
Several carlot marketers said they were having a harder time buying U. S. Motor at under 2.75 cents for resale purposes. Two or three marketers, who had been doing some "short" selling for deferred shipment, said they now were unwilling to take a chance on further declines. They were inclined to believe that there was a better chance for a higher market in June than for a lower one.

Sales of U. S. Motor gasoline were reported May 16 at 2.625 to 3.25 cents, depending somewhat upon the destination, origin and quality of the material. In most cases, however, sellers reported they were able to get at least 2.75 cents for full specification U. S. Motor. Some Motor was moving out of differential territory refineries into Indiana and Michigan points at under 2.75 cents, f.o.b. Group 3. It was reported that quite a bit of the U. S. Motor now being offered by Oklahoma and Texas refiners at the low of the spot market was a straight run product with low anti-knock rating and this was being used principally as a "low priced" or third retail grade.

Kerosine was fairly active and most sellers made no changes in prices. Two refiners said they were sold up and would be out of the market for some time. Sales of 41-43 w. w. were reported mostly at 2.375 to 2.625 cents.

Distillate, gas and fuel oils were

Current Prices of Principal Mid-Continent Refined Products


Cents Per Gallon
58-60-437 E.P.U.S. Motor Gasoline
41-43 W.W. Kerosine
38-40 Straw Distillate
32-36 Straw Gas Oil
24-26 Fuel Oil
Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June
1930
1931

Prices shown are in Group 3 basis and extended to date shown in Refinery Market Table Section of this issue

quiet all week. Some movement of domestic burner fuels was reported but not enough to hold prices up. Industrial fuel oils were inactive. Industrial gas oil was sold at under 1 cent a gallon.

Atlantic Asks Refund On Ocean Rates

WASHINGTON, May 18.—Action has been begun by the Atlantic Refining Co. before the United States Shipping Board against the Ellerman and Bucknall Steamship Co. Ltd., Union Castle Mail Steamship Co. Ltd., Prince Line, Ltd., American South African Line, Inc., R. P. Houston & Co. and Clan Line Steamers, Ltd., seeking to recover from them $36,617.17 of excess freight it asserts was taken from it for the periods from Oct. 1, 1928, to Sept. 30, 1929 and Oct. 1, 1929 to Sept. 30, 1930 on shipments of petroleum products from New York and Philadelphia to Cape Town and other south African ports and to ports in Mauritis, Reunion and Madagascar.

For similar shipments to and from the same ports, the Atlantic complaint alleges the ship lines, through their co-operative arrangements and conferences, accorded undue and unreasonable preferences in rates to the Vacuum Oil Co., a competitor, in the amount of the sum mentioned. The preference was given, the complaint alleges either to the Vacuum Oil Co. of South Africa, Ltd., or to the Vacuum Oil Co.

The "illegal discrimination" alleged, the complaint says, amounted to 6.75 cents a case on shipments rated by the case to each of eighteen ports and from 3.25 to 4 cents when the shipments were carried on ship's option No. 56. The Atlantic avers that that amount was lost as it was unable to recoup any part of the greater charges by increasing the price of its products over those of the Vacuum Oil Co.

All except the American South African Line, are British corporations.

Shipments From Southern California

LOS ANGELES, May 14—Shipments of bulk petroleum from southern California ports to Foreign and Atlantic Seaboard ports totaled 962,283 barrels for weeks ended May 9 as compared with a total of 931,721 barrels shipped to the same ports a week ago. Destination and quantity of shipments were as follows:

Destination	Crude	Gasoline	Diesel	Fuel	Kerosine	Total
Pacific For.	74,102	160,074	72,062	470,381	36,907	470,381
Atlantic Dom.	.....	56,274	.....	.....	.....	56,274
Atlantic For.	.....	92,483	.....	.....	.....	92,483

Shipments from these ports during April totaled 8,332,076 barrels, an increase of 169,202 barrels over shipments during March. April shipments were as follows:

Destination	Crude	Gasoline	Fuel	Kerosine	Distillate	Diesel	Total
Pacific Dom.	1,721,978	1,252,078	861,537	10,922	1,856	190,757	4,039,128
Pacific For.	282,535	338,370	1,084,291	58,591	17,098	309,531	2,090,416
Atlantic Dom.	.....	1,292,232	.....	.....	391,065	.....	1,683,297
Atlantic For.	.....	519,235	.....	.....	.....	.....	519,235

Prices 10 Years Ago
May 16, 1921

	Oklahoma	Penna.
58-60 U. S. Motor	13.25-13.75	19.25-20.00
80-84 Natural	8.00-8.25	.....
Kerosine (41-43 Okla.; 47 w. w. Pa.)	3.00-3.25	7.25-7.50
Fuel Oil (24-26 Okla.; 36-40 Pa.)	$0.55-$0.60	4.25-4.75
Crude (Okla. 35-35.9)	$1.50	$3.50
Chicago tank wagon (no state tax)		20.00c

Prices A Year Ago
May 19, 1930

	Oklahoma	Penna.
58-60 U. S. Motor	7.1023	8.375-8.50
Grade A Natural	6.50	.....
Kerosine (Okla. 41-43; Pa. 47 w. w.)	4.125-4.25	6.00-6.25
Fuel Oil (Okla. 24-26; Pa. 36-40)	$0.75-$0.80	4.00-4.25
Crude (Okla. 35-35.9)	$1.255	$2.75
Chicago tank wagon (including 3c tax)		18.00c

Mid-Continent Refinery Markets

Heavy Trading Bolsters Naturals Market

TULSA, May 16
Staff Special

A RAPID development in demand for natural gasolines featured the Mid-Continent market the week of May 11 to 16. Almost overnight sufficient buying developed for sales to amount to several hundred cars late in the week.

Four buyers were active in the market. Dale Moore, independent broker with offices in Tulsa, was probably the most active purchaser. He was reported to have bought approximately 600,000 gallons for shipment to the Gulf. This gasoline was to go into storage there, according to reports, to replace some gasoline recently shipped on an export order. Mr. Moore last week bought a cargo of 64-66, 375 e. p. gasoline from Mid-Continent refiners for shipment to the Gulf.

The Hanlon-Buchanan Co. Inc., was another purchaser. This company has a stabilizing plant on the Gulf coast and has been in the export business periodically for several months. Most of the buying this time was reported to be for storage at the company's terminal.

The Sinclair Oil & Gas Co. was in the market for some natural gasoline to apply on its commitments to regular accounts. The company at present has most of its natural gasoline plants making a more stable natural gasoline and has bought on the outside to supply customers requiring the ordinary specifications material.

The Standard Oil Co. of Indiana was the fourth purchaser. The amount of gasoline bought was not revealed, but this company has been active on several occasions, buying from 50 to 100 cars at a time.

The result of this wave of buying was to clear up all the grade AA at 1.375 cents a gallon, and prices May 16 were firmly pegged at 1.50 cents, with occasional quotations at slightly higher prices.

At the same time the Phillips Petroleum Co. was reported to have sold a small cargo of stabilized natural gasoline for export.

This export buying was greeted with considerable optimism among natural gasoline manufacturers and refiners in the Mid-Continent. In was taken as an indication business from abroad had picked up and that the summer demand for export was returning.

Demand for refined gasolines also showed some improvement in all districts. While prices for the most part were 2.75 cents and up, Group 3 freight basis, late in the week, an unmistakable undertone of improvement was noted. A few refiners advanced quotations slightly and reported being well sold up.

Most of the demand was for the lower gravity gasolines. Naphthas were almost as active as the U. S. Motor grade. The higher gravity gasolines were almost a dead issue.

Reports were heard of gasoline as low as 2.50 cents a gallon, Group 3 basis, but a careful check showed that it was not guaranteed to meet U. S. Motor specifications. This fact was revealed when the sellers refused instructions for shipment of the gasoline to states where the minimum requirement for motor fuel marketable was the government specifications for U. S. Motor.

Contract shipments were exceptionally good, a majority of refiners reported. In Kansas and Louisiana and Arkansas refiners reported being in an excellent position as far as stocks were concerned.

Reports were current that several large companies were preparing to buy some gasoline but as far as could be learned no sizeable purchases had been made this week.

Kerosines were in excellent shape in Kansas with demand steady from the grain belt as harvesting time drew near. Prices also were steady. Demand showed a little improvement in the other districts but not sufficiently to affect prices.

Distillates were virtually out of the refined oils picture for the summer.

Gas oils were freely offered in several quarters. This was particularly true of the ordinary grades. Considerable gas oil was offered from the Oklahoma City refining district and was moved "at a price" where the purchaser could use a high cold test oil. The straw gas oils were scarcer and demand steady.

North Texas experienced the only change of note as far as fuel oils were concerned. Railroads serving that district were reported to have changed their buying policy, and hereafter will purchase their fuel oil requirements from month to month rather than on long contracts as they had done for several months past. Coupled with the fact that two or three plants have been all but shut down the fuel market was firmer although no changes were noted in prices.

Bright stock prices were unchanged. Demand remained light with competition keen for what spot business existed. Little differential existed between the low and the high cold test grades, due to this competition.

Demand for neutral oils also was light, most refiners reported. A few minor price changes were reported but they were within the ranges already shown.

Wax demand was lighter and prices moved down to 1.75 cents a pound for the 124-126 white crude scale grade.

Newspapers Make Much Of Navy Fuel Bids

WASHINGTON, May 15—The Navy Department got unusual publicity this week when it let contracts for bunker and diesel engine oils for about 5,155,000 barrels for naval services on the Pacific coast, the Phillipines and Hawaii because of the awards to the Union Oil Co. and the Shell Oil Co. Deliveries are to be made in the year ending June 30, 1932.

Press associations and individual newspapers revived old stories about the connection between the two American corporations on the one hand and the British and Dutch companies on the other.

They did not, however, revive the stories printed at the time when the Department of the Interior had to hold that the then so-called Royal Dutch-Shell companies were American companies notwithstanding the affiliations they might have had with the foreign companies.

The Navy Department heretofore has awarded contracts to the Shell because the law practically forces it so to do the only condition being that the oil delivered shall be of the production of the United States or its possessions.

The contracts for furnishing fuel and diesel oil to stations in the Pacific were awarded as follows:

Fuel Oil, Grade B, (Bunker)

	Bbls.	
Union Oil Co.	216,000	$204,620
Shell Oil Co.	4,620,000	2,260,100
Associated Oil Co.	160,000	95,250
Totals	4,996,000	$2,559,970

Fuel Oil For Diesel Engines

	Bbls.	
Union Oil Co.	158,750	$143,280.00
General Petroleum	250	357.50
	159,000	$143,637.50

New Marketer Has Seven Stations

HARTFORD, Conn.—Benjamin F. Ross recently organized the Connecticut Oil Co. of Hartford, Inc. here, to market petroleum products. The company operates seven service stations, five of which are in Hartford, one in West Hartford, and one at New Britain, Conn. Monthly sales average 150,000 gallons, Mr. Ross reports.

Comparative Prices of 58-60 U. S. Motor Gasoline, 437 E. P., Group 3 and Point of Origin, to Jobbers Only

In Effect May 18

	Price F.O.B. Group 3	*Price F.O.B. Point of Origin*	*If for Particular Destination*
Oklahoma	2.875–3.25	2.875–3.25	
Kansas	3.00–3.375		S. O. Neb. & Indiana Territories, etc.
Kansas		3.50 –3.75	Kansas only.
North Texas	2.875–3.125	2.875–3.125	
West Texas	2.875–3.125	2.875–3.125	
Louisiana-Arkansas	3.125–3.50		Michigan, Ohio and Indiana.
Louisiana-Arkansas		3.50	State or differential haul.
Indiana-Illinois	2.875–3.25	*	S. O. Indiana territory except Detroit and vicinity. For Ohio on delivered basis only.

*Shipments made from Indiana and Illinois refineries, according to conditions and freight rates; no prices F. O. B. point of origin can be given.

Chicago Tank Car Market

CHICAGO, May 16

GASOLINE movement to contract buyers continued good in the Chicago market the past week; spot movement was fair. Tank car prices were 0.125 cent lower for most grades of gasoline. Sales of U. S. Motor were made mostly at 2.75 to 3.25 cents for prompt shipment. Kerosine was steady. Distillate, gas and fuel oils were quiet and were offered at lower prices. Industrial fuel oil demand was light.

Following prices represent majority of sales made on Group 3 freight basis, although shipments may originate in other refining districts, such as North and West Texas, Louisiana, Arkansas, Indiana, Illinois, Kentucky, etc.

	Prices May 18	Prices May 11	Prices May 4
50-52, 437 e.p. naphtha	2.875– 3.00	3.00 – 3.125	3.00 – 3.125
58-60 U. S. Motor, 437 e.p.	2.75 – 3.25	2.875– 3.375	3.00 – 3.375
†56-62 400-437 e.p. anti-knock gasoline	3.125– 4.00	3.375– 4.25	3.50 – 4.50
60-62 437 e.p. gasoline	2.875– 3.375	3.00 – 3.375	3.125– 3.50
60-62 400 e.p. gasoline	3.00 – 3.50	3.125– 3.50	3.25 – 3.50
64-66 375 e.p. gasoline	3.50 – 3.75	3.50 – 3.75	3.625– 4.00
68-70 350-360 e.p. gasoline	3.75 – 4.00	3.875– 4.25	4.125– 4.375
*Domestic Aviation Gasoline	5.25 – 5.75	5.25 – 5.75	5.25 – 5.75
41-43 w.w. kerosine	2.375– 2.625	2.375– 2.75	2.50 – 2.75
42-44 w.w. kerosine	2.50 – 2.875	2.625– 2.875	2.625– 2.875
38-40 p. w. distillate	1.75 – 2.00	1.875– 2.125	2.00 – 2.25
38-40 straw distillate	1.625– 1.875	1.75 – 2.00	2.00 – 2.25
32-36 ordinary dark gas oil	0.875– 1.125	1.00 – 1.25	1.125– 1.25
32-36 dark zero gas oil	1.375– 1.625	1.50 – 1.75	1.625– 1.875
32-36 straw zero gas oil	1.50 – 1.75	1.625– 1.875	1.75 – 2.00
28-30 zero fuel oil (per bbl.)	$0.60 –$0.675	$0.65 –$0.70	$0.675–$0.725
28-30 fuel oil (per bbl.)	$0.60 –$0.65	$0.65 –$0.675	$0.65 –$0.70
24-26 fuel oil (per bbl.)	$0.425–$0.475	$0.45 –$0.50	$0.45 –$0.50
18-22 fuel oil, low sulfur (per bbl.)	$0.35 –$0.375	$0.35 –$0.40	$0.375–$0.425
18-22 fuel oil, high sulfur zero (per bbl.)	$0.35 –$0.375	$0.35 –$0.40	$0.375–$0.425
14-16 fuel oil (per bbl.)	$0.30 –$0.35	$0.325–$0.35	$0.325–$0.35

*Prices are based on U. S. Gov't. specifications or better. Present Gov't. specifications require distillation range of 5% recovery at not more than 167° F., and not less than 122° F.; 50% recovery at 221°; 90% at 311°; 96% at 347°; end point 374° F. Gasoline of fighting grade specifications in some instances sells at a premium over domestic aviation grade. Prices represent majority of quotations.

†Over 45% benzol equivalent. Prices represent quotations and sales.

Crude and Refining Costs Half of Gasoline Dollar

WASHINGTON—About 50 cents out of every $1 spent at retail for gasoline through the country represents the cost of crude and of refining it, according to a survey made recently by the Department of Commerce published as the "Petroleum Industry of the Gulf Southwest."

Refinery output of gasoline was valued at over $1,579,000,000 in 1929, according to the most recent census of manufacturers of the commerce department.

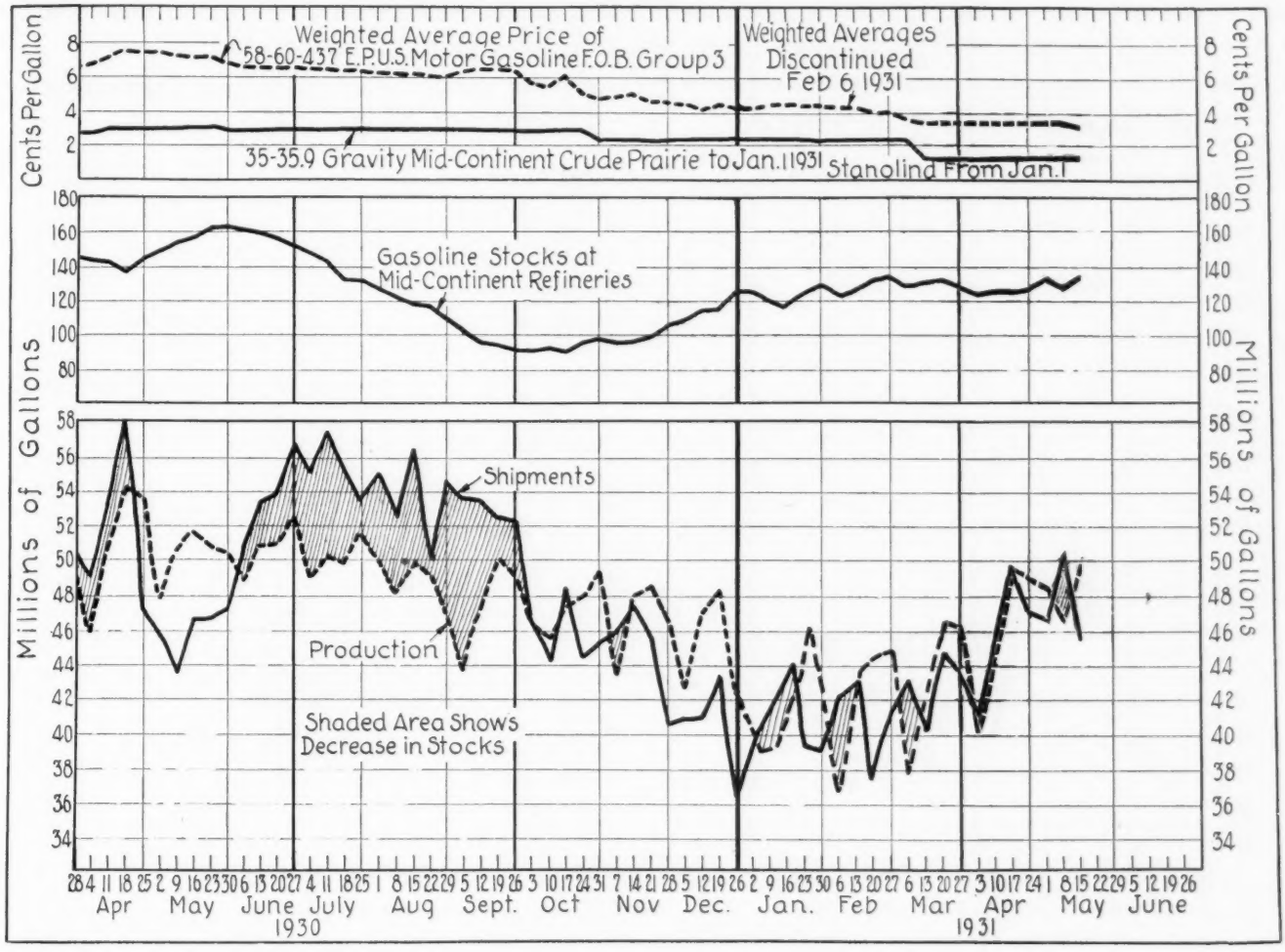
This survey pointed out further that the average gasoline dollar indicates 23 cents goes to cover the cost of wholesaling, 7 cents for transportation, 10 cents for gasoline taxes and 10 cents as the margin for the gasoline retailer.

TORONTO—A year's requirements of gasoline will be supplied Brantford, Ont. by McColl-Frontenac Oil Co. here.

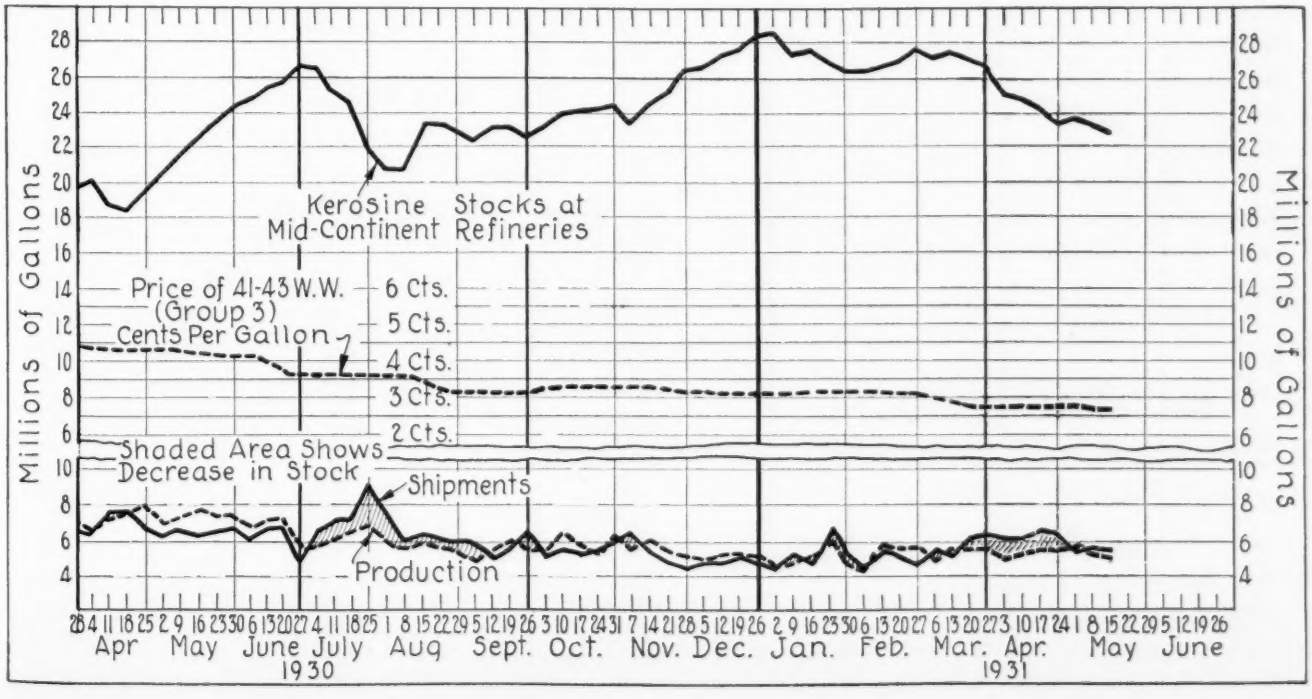
Imperial Oil, Ltd. will furnish the city with road oil and paving asphalt for a year and will also furnish liquid asphalt to London, Ont., according to reports.

Barometer of Mid-Continent Refinery Market—Week Ending May 15

Charted Course of Prices, Production, Shipments, Stocks of Principal Refined Products, Week by Week, From Reports Made by 93 Plants to National Petroleum News


Cents Per Gallon
Weighted Average Price of 58-60-437 E.P.U.S. Motor Gasoline F.O.B. Group 3
Weighted Averages Discontinued Feb 6 1931
35-35.9 Gravity Mid-Continent Crude Prairie to Jan. 1 1931
Stanolind From Jan. 1
Gasoline Stocks at Mid-Continent Refineries
Millions of Gallons
Shipments
Production
Shaded Area Shows Decrease in Stocks
Apr May June July Aug Sept. Oct Nov Dec. Jan. Feb Mar Apr May June
1930
1931

Prices shown above are extended to date shown in Refinery Market and Crude tables in Market section of this issue and stocks, shipments and Production are extended to date as shown in the table on page 74



Refinery Markets on Light Oils and Lubricants

Prices given below are in cents per gallon, except where $ is shown in tank car lots, f.o.b. Refinery. They represent prices made only to domestic jobbers who resell to the consuming public, except where otherwise noted.

(These Refinery Prices compiled in the OIL PRICE HANDBOOK for a whole year)

GASOLINE AND NAPHTHA

OKLAHOMA (F. o. b. Oklahoma refineries)

	Prices May 18	Prices May 11	Prices May 4
48-50 450 e.p. naphtha...	2.75 – 2.875	2.75 – 2.875	3.00
50-52 450 e.p. naphtha...	2.75 – 2.875	2.75 – 2.875	3.00
56-58 450 e.p. gasoline...	2.75 – 2.875	2.75 – 2.875	3.00
58-60 450 e.p. gasoline...	2.75 – 2.875	2.75 – 2.875	3.00
58-60 U.S. Motor 437 e.p.	2.875– 3.25	3.00 – 3.50	3.125– 3.50
60-62 437 e.p. gasoline...	3.00 – 3.375	3.00 – 3.50	3.25 – 3.50
60-62 400 e.p. gasoline...	3.125– 3.50	3.125– 3.625	3.375– 3.875
64-66 390 e.p. gasoline...	3.50 – 3.75	3.50 – 3.75	3.75 – 4.00
64-66 375 e.p. gasoline...	3.625– 4.00	3.75 – 4.00	4.00 – 4.25
68-70 350-360 e.p. gasoline	3.875– 4.125	4.00 – 4.25	4.25 – 4.375
‡Domestic Aviation Gasoline.....	5.00 – 5.25	5.25 – 5.75	5.25 – 6.00

‡Prices based on U. S. Gov't. specifications or better. Present Gov't. specifications require distillation range of 5% recovery at not more than 167° F., and not less than 122° F.; 50% rec. at 221°; 90% at 311°; 96% at 347°; end point, 374°F. Fighting grade in some instances sells at a premium over domestic aviation grade. Prices represent majority of quotations.

PENNSYLVANIA (F. o. b. Western Pennsylvania refineries)

52-54 Naphtha.....	5.00 – 5.25	5.00 – 5.25	5.00 – 5.25
54-56 Naphtha.....	5.00 – 5.25	5.00 – 5.25	5.00 – 5.25
58-60 U.S. Motor 437 e.p.	5.00 – 5.25	5.00 – 5.25	5.00 – 5.25
60-62 400-410 e.p. gasoline	5.125– 5.50	5.125– 5.50	5.25 – 5.50
64-66 390 e.p. gasoline...	5.375– 5.75	5.50 – 5.75	5.50 – 5.75
68-70 350-360 e.p.....	6.00 – 6.50	6.125– 6.50	6.125– 6.50

OHIO (Quotations of S. O. Ohio. 4c state tax to be added.)

U. S. Motor Gasoline

Ohio, delivery at any point.....	8.00	8.00	8.00

KANSAS (F. o. b. refinery Kansas destination)

58-60 U.S. Motor 437 e.p.	3.50 – 3.75	3.50 – 3.75	3.50 – 3.75
60-62 437 e.p. gasoline...	3.50 – 3.75	3.50 – 3.75	3.75 – 4.00
60-62 400 e.p. gasoline...	3.625– 3.875	3.625– 3.875	4.00 – 4.25
64-66 375 e.p. gasoline...	4.00 – 4.25	4.00 – 4.50	4.375– 4.625

NORTH TEXAS (F. o. b. North Texas refineries)

56-58 450 e.p. gasoline...	2.625	2.625	3.00
58-60 450 e.p. gasoline...	2.625	2.625	3.00
58-60 U.S. Motor 437 e.p.	2.875– 3.125	2.875– 3.125	3.125– 3.375
60-62 400 e.p. gasoline...	3.00 – 3.25	3.00 – 3.25	3.375– 3.75
64-66 390 e.p. gasoline...	3.375– 3.625	3.375– 3.625	3.75
64-66 375 e.p. gasoline...	3.75	3.75	4.00 – 4.125
68-70 350-360 e.p. gasoline	4.00	4.00	4.25

****WEST TEXAS** (F. o. b. West Texas refinery, for unrestricted shipment)

50-52 naphtha.....	2.50	2.50	2.50
58-60 437 e.p. gasoline...	2.625	2.625	2.75
58-60 U.S. Motor 437 e.p.	2.875– 3.125	2.875– 3.125	3.00 – 3.25

NORTH LOUISIANA (N. La., Ark. and Miss. destination)

58-60 U.S. Motor 437 e.p.	3.50	3.75	3.75

ARKANSAS (Ark., N. La. and Miss. destination)

58-60 U.S. Motor 437 e.p.	3.50	3.75	3.75

CALIFORNIA (3c tax to be added to California gasoline prices if used in state.)

54-58 U.S. Motor 437 e.p.	3.00 – 3.75	3.00 – 3.50	3.00 – 3.75
54-58 U.S. Motor, for outside state shipment....	3.25 – 4.00	3.125– 3.50	3.25 – 3.75
58-61 375-400 e.p. gasoline	3.75 – 4.75	4.00 – 5.00	4.00 – 5.00
42-45 Engine Distillate 445-480 e.p.....	3.00 – 3.50	3.00 – 3.50	3.00 – 3.50

NATURAL GASOLINE

(Note: End point of all grades, not over 375F. Corrosion test adopted Oct. 1, 1927; A.S.T.M. Method D130-27T; doctor test, July 2, 1928.)

OKLAHOMA (F. o. b. Oklahoma refineries)

Grade AA, 80-87.9, 90% Recovery.....	**1.50 –1.625	1.50	1.50 – 1.75
Grade A, 72-79.9, 90% Recovery.....	1.875 –2.00	1.75	1.625– 1.75
Grade BB, 84-92, 85% Recovery.....	1.50	1.375	1.50
Grade B, 76-83.9, 85% Recovery.....	1.50	1.375	1.50
Grade C, 80-92, 78% Recovery.....	1.50	1.375	1.50

NORTH TEXAS (F. o. b. Breckenridge)

	Prices May 18	Prices May 11	Prices May 4
Grade AA, 80-87.9, 90% Recovery.....	**1.50 – 1.625	1.50	1.50 – 1.75
Grade A, 72-79.9, 90% Recovery.....	1.875– 2.00	1.75	1.625– 1.75
Grade BB, 84-92, 85% Recovery.....	1.50	1.375	1.50
Grade B, 76-83.9, 85% Recovery.....	1.50	1.375	1.50
Grade C, 80-92, 78% Recovery.....	1.50	1.375	1.50

NORTH LOUISIANA (F. o. b. Monroe District)

Grade AA.....	†1.875	†1.75	†1.75
Grade BB.....	†1.625	†1.625	†1.625
Grade C.....	†1.625	†1.625	†1.625

CALIFORNIA (F. o. b. California refineries)

75-85, 375-390 e.p. for blending.....	2.50 – 3.00	2.75 – 3.25	2.75 – 3.25

BURNING OILS

PENNSYLVANIA (F. o. b. Western Pennsylvania refineries)

45 w.w. kerosine.....	4.125– 4.375	4.25 – 4.375	4.25 – 4.50
46 w.w. kerosine.....	4.25 – 4.50	4.375– 4.625	4.50 – 4.75
47 w.w. kerosine.....	4.50 – 4.75	4.50 – 4.75	4.50 – 5.00

OKLAHOMA (F. o. b. Oklahoma refineries)

41-43 w.w. kerosine.....	2.50 – 2.75	2.50 – 2.75	2.50 – 2.75
42-44 w.w. kerosine.....	2.625– 2.875	2.625– 2.875	2.625– 2.875

KANSAS (F. o. b. refinery Kansas destination)

41-43 w.w. kerosine.....	2.875– 3.125	2.875– 3.125	3.00 – 3.25
42-44 w.w. kerosine.....	3.00 – 3.25	3.00 – 3.25	3.125– 3.375

NORTH TEXAS (F. o. b. North Texas refineries)

40-42 w.w. kerosine.....	2.25 – 2.375	2.375	2.375
41-43 w.w. kerosine.....	2.375– 2.625	2.50 – 2.625	2.50 – 2.625

NORTH LOUISIANA (N. La., Ark. and Miss. destination)

41-43 w.w. kerosine.....	3.25 – 3.50	3.25 – 3.50	3.25 – 3.50

ARKANSAS (Ark., N. La. and Miss. destination)

41-43 w.w. kerosine.....	3.25 – 3.50	3.25 – 3.50	3.25 – 3.50

CALIFORNIA (F. o. b. California refineries)

38-40 w.w. kerosine.....	4.00 – 4.75	4.00 – 4.50	4.00 – 4.50

NEUTRAL OIL

PENNSYLVANIA (F. o. b. Western Pennsylvania refineries)

Vis.	(Viscosity at 70° F.)		
200 No. 3 color, 420-425 flash.....	21.00 –21.50	21.50 –22.00	21.50 –22.00
180 No. 3 color, 410-415 flash.....	18.00 –19.00	18.50 –19.00	18.50 –19.00
150 No. 3 color, 400-405 flash.....	16.00 –17.00	16.00 –17.00	16.50 –17.00

****MID-CONTINENT** (F. o. b. Mid-Continent refineries)

Vis. Color	(Viscosity at 100° F.)		
100—No. 2.....	5.25	5.25	5.25
150—No. 3.....	6.25 – 6.75	6.25 – 6.75	6.75 – 7.00
150—No. 4.....	6.50	6.50	6.50
180—No. 3.....	8.00 – 8.50	8.00 – 8.50	8.00 – 8.50
180—No. 4.....	7.75 – 8.00	7.75 – 8.00	7.75 – 8.00
180—No. 5.....	7.50	7.50	7.50
200—No. 3.....	8.75 – 9.50	8.75 – 9.50	9.50
200—No. 4.....	8.50	8.50	8.50
200—No. 5.....	8.25	8.25	8.25
220—No. 3.....	10.00	10.00	10.00 –10.50
220—No. 4.....	9.50	9.50	9.75 –10.25
220—No. 5.....	9.00	9.00	10.00 –10.25
240—No. 3.....	11.00	11.00	12.00
240—No. 4.....	10.00	10.00	10.50
240—No. 5.....	9.50	9.50	10.50 –11.00
280—No. 3.....	12.50	12.50	14.00
280—No. 4.....	11.50	11.50	13.00
280—No. 5.....	11.00	11.00	12.00

Note: Quotations for 0 to 10 cold test neutral oils are 1 to 2 cents higher depending on the grade.

****Prices represent Quotations and Sales.**

†Prices nominal ††Only one refiner quoting *Quotations only

Refinery Markets Wax, Lubricants, Heavy Oil

Prices given below are in cents per gallon, except where $ is shown in tank car lots, f.o.b. Refinery. They represent prices made only to domestic jobbers who resell to the consuming public, except where otherwise noted.

(For quick reference to Refinery Prices, get the OIL PRICE HANDBOOK, published annually)

GULF COASTAL (F. o. b. Gulf Coastal refineries)

Vis. Color	Prices May 18 (Viscosity at 100° F., pour test 0)	Prices May 11	Prices May 4
100—No. 2 Pale	5.00 – 5.75	5.00 – 5.75	5.50 – 6.25
200—No. 3 Pale	7.50 – 8.00	7.50 – 8.00	8.00 – 8.50
300—No. 3 Pale	8.50 – 9.00	8.50 – 9.00	9.00 – 9.50
500—No. 3½ Pale	9.50 –10.00	9.50 –10.00	10.00 –10.50
750—No. 4 Pale	11.00 –11.50	11.00 –11.50	11.50 –12.50
1200—No. 4 Pale	14.50 –15.00	14.50 –15.00	14.50 –15.00
2000—No. 4-5 Pale	15.00 –15.50	15.00 –15.50	15.50 –16.00
200—No. 5½ Red Oil	6.50 – 7.00	6.50 – 7.00	7.00 – 7.50
300—No. 5½ Red Oil	7.50 – 8.00	7.50 – 8.00	8.00 – 8.50
500—No. 6 Red Oil	8.50 – 9.00	8.50 – 9.00	9.00 –10.00
750—No. 6 Red Oil	10.50 –11.00	10.50 –11.00	11.00 –11.50
1200—No. 5-6 Red Oil	13.50 –14.00	13.50 –14.00	13.50 –14.00
2000—No. 6 Plus Red Oil	14.50 –15.00	14.50 –15.00	15.50 –16.00

‡CALIFORNIA (F. o. b. California refineries)

Vis. Color	(Viscosity at 100° F.)		
100—No. 3	9.50 –10.00	9.50 –10.00	9.50 –10.00
200—No. 3	11.50	11.50	11.50
300—No. 3	13.00	13.00	13.00
450—No. 3	15.50	15.50	15.50
550—No. 3	16.50	16.50	16.50
600—No. 3	17.00	17.00	17.00
200—No. 5	11.00	11.00	11.00
300—No. 5	12.00	12.00	12.00
400—No. 5	14.00	14.00	14.00
500—No. 5	15.00	15.00	15.00
600—No. 5	16.00	16.00	16.00
700—No. 7	18.00	18.00	18.00

‡Neutral oils not manufactured commercially in California.

CYLINDER STOCKS

MID-CONTINENT (F. o. b. Mid-Continent refineries)

(Cylinder stock prices represent quotations and sales to domestic jobbers only).

190-200 Vis. D at 210° Brt. St.	18.00	18.00	20.00
150-160 Vis. D at 210° Brt. St., 0-10 cold test	13.50 –15.00	13.50 –15.00	14.50 –16.00
150-160 Vis. D at 210° Brt. St., 10-25 cold test	13.50 –14.50	13.50 –14.50	14.50 –15.00
150-160 Vis. D Brt. Stock, 25-40 cold test	13.50 –14.00	13.50 –14.00	14.00 –14.50
150-160 Vis. E 210° Brt. St.	13.00 –14.00	13.00 –14.00	13.50 –14.50
600 St. Ref. Olive Green	6.00 – 7.50	6.00 – 7.50	6.00 – 8.00
600 St. Ref. Dark Green	4.50 – 5.50	4.50 – 5.50	4.50 – 5.50
Black Oil	4.00 – 5.00	4.00 – 5.00	4.00 – 5.00

PENNSYLVANIA (F. o. b. Western Penna. refineries) (A.S.T.M. Tests)

600 Steam Refined, filterable	7.75 – 8.00	7.75 – 8.25	8.00 – 8.50
650 Steam Refined	10.75 –11.25	10.75 –11.25	11.25 –12.00
600 Flash	11.75 –12.50	11.75 –12.50	12.00 –13.00
630 Flash	17.00 –18.00	17.00 –18.00	17.00 –18.00
600 Warren E	11.75 –12.25	11.75 –12.25	11.75 –12.25
Cold Test Stocks, 140-150 vis. at 210°, 540-550 flash, No. 8 color, 20 pour test and below	17.50 –18.00	17.50 –18.00	17.50 –18.00
No. 8 color, 25 and 35 pour test	17.00 –17.50	17.00 –17.50	17.25 –17.50
No. 8 color, 40 pour test and above	17.00 –17.50	17.00 –17.50	17.25 –17.50

WAX

PENNSYLVANIA (Per pound, F. o. b. New York)

122-124 white crude scale a.m.p.	2.125	2.125	2.125
124-126 white crude scale, a.m.p.	2.125	2.125	2.125

****OKLAHOMA** (Per pound in barrels; in a few instances, per pound in burlap bags; F. o. b. Oklahoma refineries.)

124-126 White Crude Scale, a.m.p.	1.75 – 2.00	1.875– 2.00	1.875– 2.25

DISTILLATE, GAS AND FUEL OIL

PENNSYLVANIA (For outside Pittsburgh district)

36-40 fuel oil	2.75 – 2.875	2.75 – 2.875	2.625– 2.875
30-34 fuel oil	2.75 – 2.875	2.75 – 2.875	2.625– 2.875
28-32 fuel oil	2.75 – 2.875	2.75 – 2.875	2.625– 2.875

†Prices nominal ††Only one refiner quoting *Quotations only

OKLAHOMA (F. o. b. Oklahoma refineries)

	Prices May 18	Prices May 11	Prices May 4
38-40 straw distillate	1.75 – 2.125	1.75 – 2.125	2.00 – 2.375
36-38 straw distillate	1.625– 1.875	1.625– 1.875	2.00
32-36 straw gas oil	1.25 – 1.50	1.375– 1.50	1.625– 1.75
32-36 straw gas oil zero	1.625– 1.875	1.625– 1.875	1.875– 2.00
32-36 dark gas oil	1.00 – 1.375	1.00 – 1.375	1.25 – 1.50
32-36 dark gas oil zero	1.50 – 1.75	1.625– 1.75	1.75
28-30 zero fuel oil(per bbl.)	$0.65 –$0.70	$0.675–$0.70	$0.70 –$0.775
28-30 fuel oil (per bbl.)	$0.625–$0.675	$0.625–$0.675	$0.675–$0.75
26-28 fuel oil (per bbl.)	$0.525–$0.575	$0.575–$0.625	$0.575–$0.675
24-26 fuel oil (per bbl.)	$0.45 –$0.50	$0.475–$0.525	$0.475–$0.525
22-26 fuel oil (per bbl.)	$0.45 –$0.50	$0.45 –$0.50	$0.45 –$0.50
18-22 fuel oil (per bbl.)	$0.35 –$0.40	$0.375–$0.425	$0.375–$0.425
16-20 fuel oil (per bbl.)	$0.35 –$0.40	$0.375–$0.40	$0.375–$0.40
14-16 fuel oil (per bbl.)	$0.325–$0.35	$0.35 –$0.375	$0.35 –$0.375

KANSAS (F. o. b. refinery Kansas destination)

38-40 straw distillate	2.25 – 2.50	2.25 – 2.50	2.625– 2.75
36-38 straw distillate	2.125– 2.25	2.125– 2.25	2.50
32-36 straw gas oil	2.00 – 2.25	2.00 – 2.25	2.25 – 2.50
18-22 fuel oil (per bbl.)	$0.475–$0.575	$0.475–$0.575	$0.475–$0.575
10-14 fuel oil (per bbl.)	$0.35 –$0.40	$0.40 –$0.45	$0.40 –$0.45

NORTH TEXAS (F. o. b. North Texas refineries)

38-40 straw distillate	1.75 – 2.00	1.75 – 2.00	2.00 – 2.25
38-40 p.w.treated distillate	1.875– 2.125	2.00 – 2.25	2.00 – 2.375
32-36 gas oil, cracked	1.25 – 1.50	1.375– 1.625	1.50 – 1.75
32-36 St. reduced gas oil	1.00 – 1.375	1.00 – 1.375	1.25 – 1.50
24-26 fuel oil (per bbl.)	$0.375–$0.425	$0.375–$0.425	$0.375–$0.425
20-24 fuel oil (per bbl.)	$0.325–$0.375	$0.325–$0.375	$0.325–$0.375
18-22 fuel oil (per bbl.)	$0.30 –$0.35	$0.30 –$0.35	$0.30 –$0.35

****WEST TEXAS** (F. o. b. West Texas refinery, for unrestricted shipment.

34-38 gas oil	1.625– 1.75	1.625– 1.75	1.625– 1.75
30-32 gas oil	1.00 – 1.25	1.00 – 1.25	1.00 – 1.25
28-30 zero gas oil	1.375– 1.625	1.50 – 1.75	1.50 – 1.75
18-22 fuel oil (per bbl.)	$0.375–$0.40	$0.375–$0.40	$0.375–$0.40

NORTH LOUISIANA (N. La., Ark. and Miss. destination)

32-36 gas oil, dark	2.25 – 2.50	2.25 – 2.50	2.25 – 2.50
32-36 gas oil, straw	2.25 – 2.50	2.25 – 2.50	2.25 – 2.50
14-16 fuel oil (per bbl.)	$0.55 –$0.65	$0.55 –$0.65	$0.55 –$0.65

ARKANSAS (Ark., N. La. and Miss. destination)

32-36 gas oil, straw	2.25 – 2.375	2.25 – 2.375	2.125– 2.375
32-36 dark gas oil	2.25 – 2.375	2.25 – 2.375	2.125– 2.375
28-30 gas oil	2.125– 2.25	2.125– 2.25	2.125– 2.25
20-24 fuel oil (per bbl.)	$0.75	$0.75	$0.75
9-12 fuel oil (per bbl.)	$0.525–$0.575	$0.525–$0.575	$0.525–$0.575
Black oil	3.00 – 3.25	3.00 – 3.25	3.00 – 3.25

CALIFORNIA (F. o. b. San Joaquin Valley. Nominal pipe line charge to San Francisco 24c per bbl. more and to San Pedro 20c per bbl. more.)

14-18 fuel oil (per bbl.)	$0.45 –$0.55	$0.40 –$0.50	$0.35 –$0.50
14-18 Bunker oil (per bbl.)	$0.55 –$0.80	$0.55 –$0.80	$0.55 –$0.80
30-34 gas oil (per bbl.)	$0.70 –$0.85	$0.65 –$0.80	$0.65 –$0.80
27 Plus Diesel oil (per bbl.)	$0.65 –$0.80	$0.65 –$0.80	$0.65 –$0.80

PETROLATUMS

PENNSYLVANIA (Per pound, in barrels, carload lots, f. o. b. Penna. refinery. In tank cars ½c to ¾c per pound less.) Two refiners quoting.

Snow White	6.50 – 7.25	6.50 – 7.25	6.50 – 7.25
Lily White	5.125– 6.00	5.125– 6.00	5.125– 6.00
Cream White	4.125– 5.00	4.125– 5.00	4.125– 5.00
Light Amber	2.625– 3.00	2.625– 3.00	2.625– 3.00
Amber	2.375– 2.75	2.375– 2.75	2.375– 2.75
Red	1.875– 2.50	1.875– 2.50	1.875– 2.50

PETROLEUM COKE

****OKLAHOMA** (F. o. b. Oklahoma refineries)

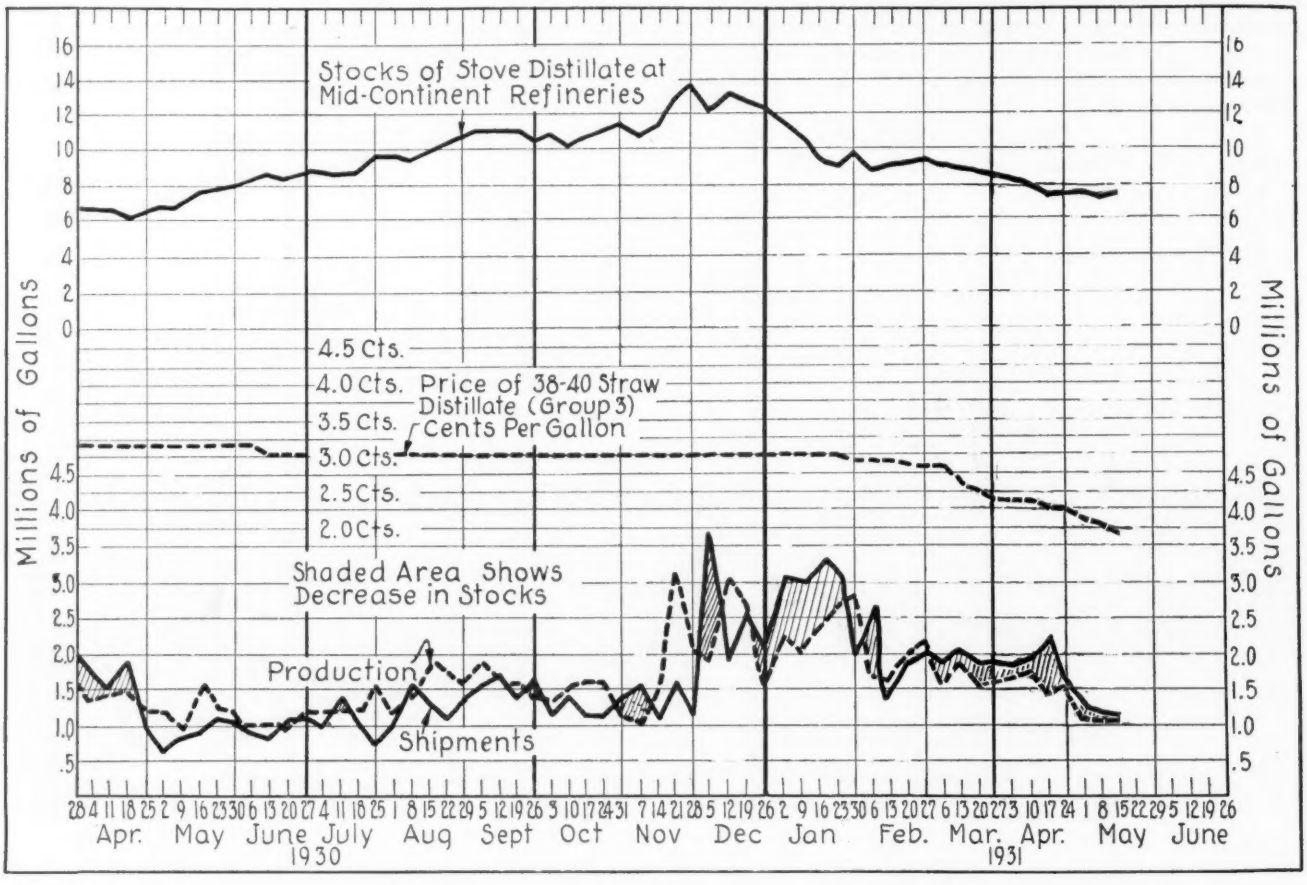
(Per ton in car lots)

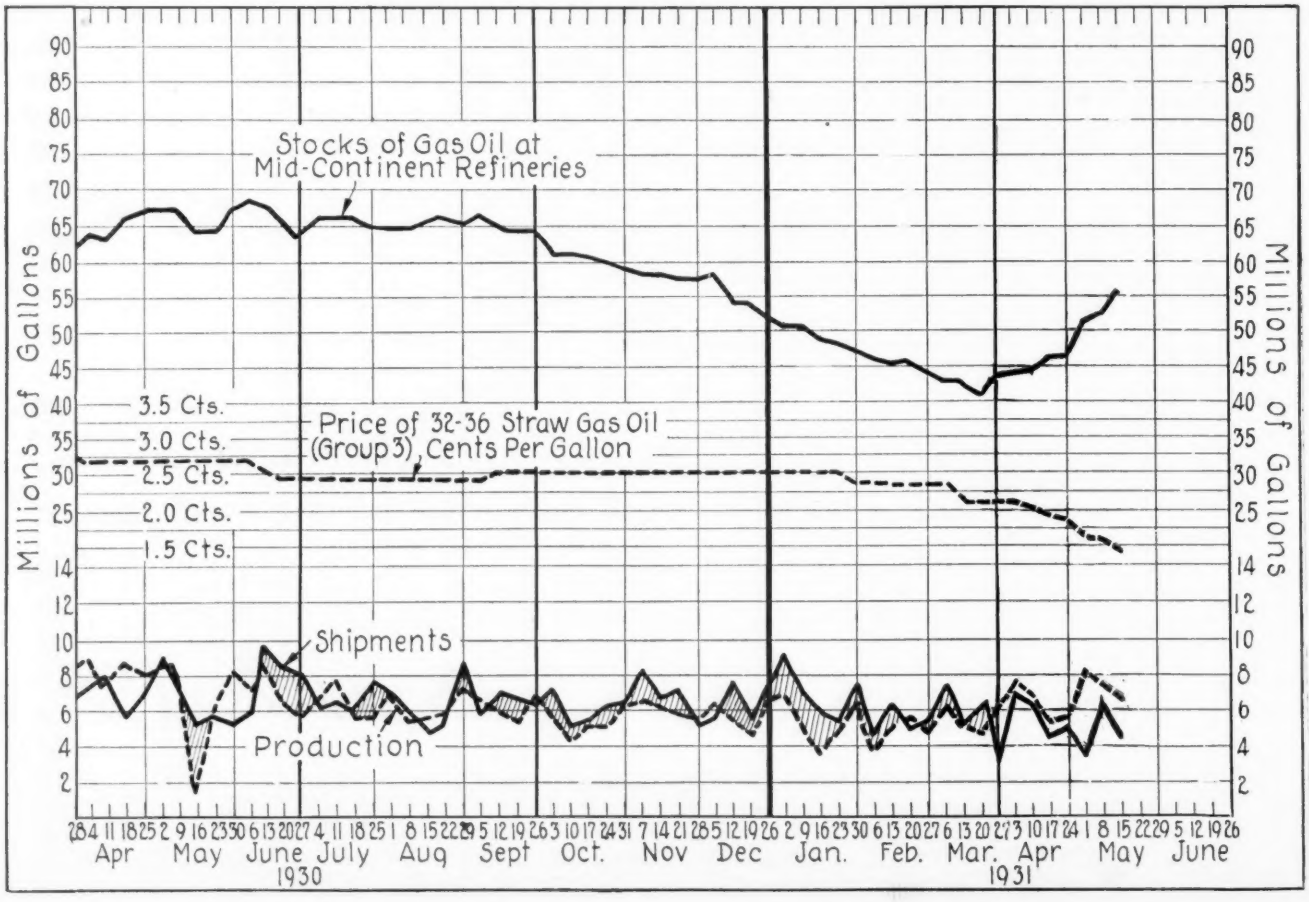
Lump	$3.00	$4.50 –$5.00	$4.50 –$5.00
Still run	$2.00	$3.00	$3.00
Breeze	$1.25	$2.00	$2.00

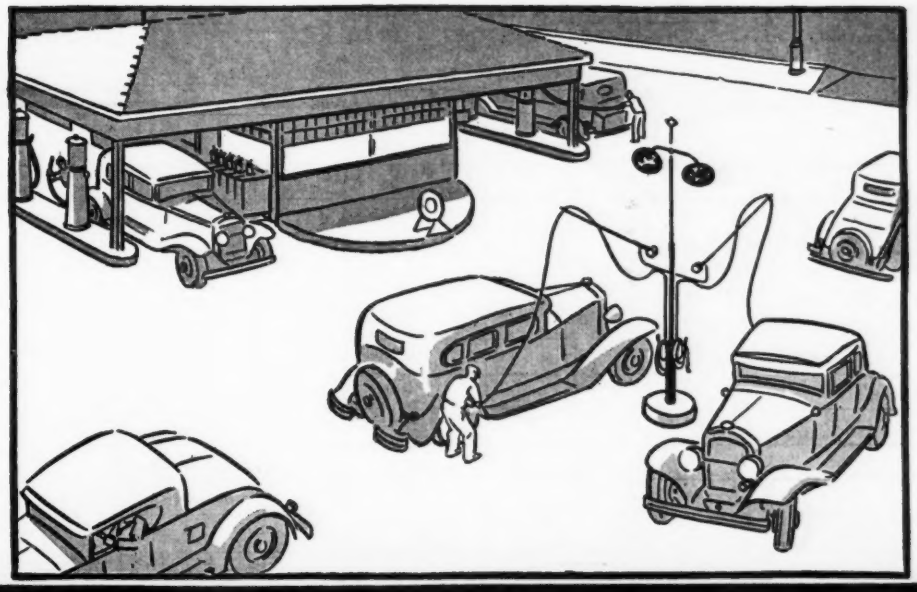
****Prices represent Quotations and Sales**

Barometer of Mid-Continent Refinery Market—Week Ending May 15

Charted Course of Prices, Production, Shipments, Stocks of Principal Refined Products, Week by Week, From Reports Made by 93 Plants to National Petroleum News







DIAMOND-U

Tire Inflator

brings 'em in!

WHEN HARD TIMES force people to sweat every dollar to the limit of its buying power, the care of tires is clearly seen in the light of its real importance. Tire miles—tire economy—positively depend upon ACCURATE INFLATION. Thousands, once careless, now patronize service stations that provide dependably accurate pressure gauging equipment—Diamond-U Tire Inflators.

ASK ANY USER...THERE'S ONE NEAR YOU

No other means of gauging and inflating tires matches the Diamond-U's performance and value. Over two year's service has *proved* it—and proved that this equipment brings in new customers!

In the Diamond-U Tire Inflator you have master gauge *Accuracy*, unaffected by rough treatment or weather conditions—utmost operating *Speed* —feather-light weight (just 12 1/2 ounces)—and absolutely unparalled performance—all for only $12.50 anywhere in the United States.

Get the business this PROVED equipment attracts. Save hours of time. Protect the reputation of the tires you sell. Order *your* Diamond-U Tire Inflators *now*, while its on your mind.

SERVICE EQUIPMENT COMPANY, *Mfrs.*, SOUTH GATE, CALIFORNIA

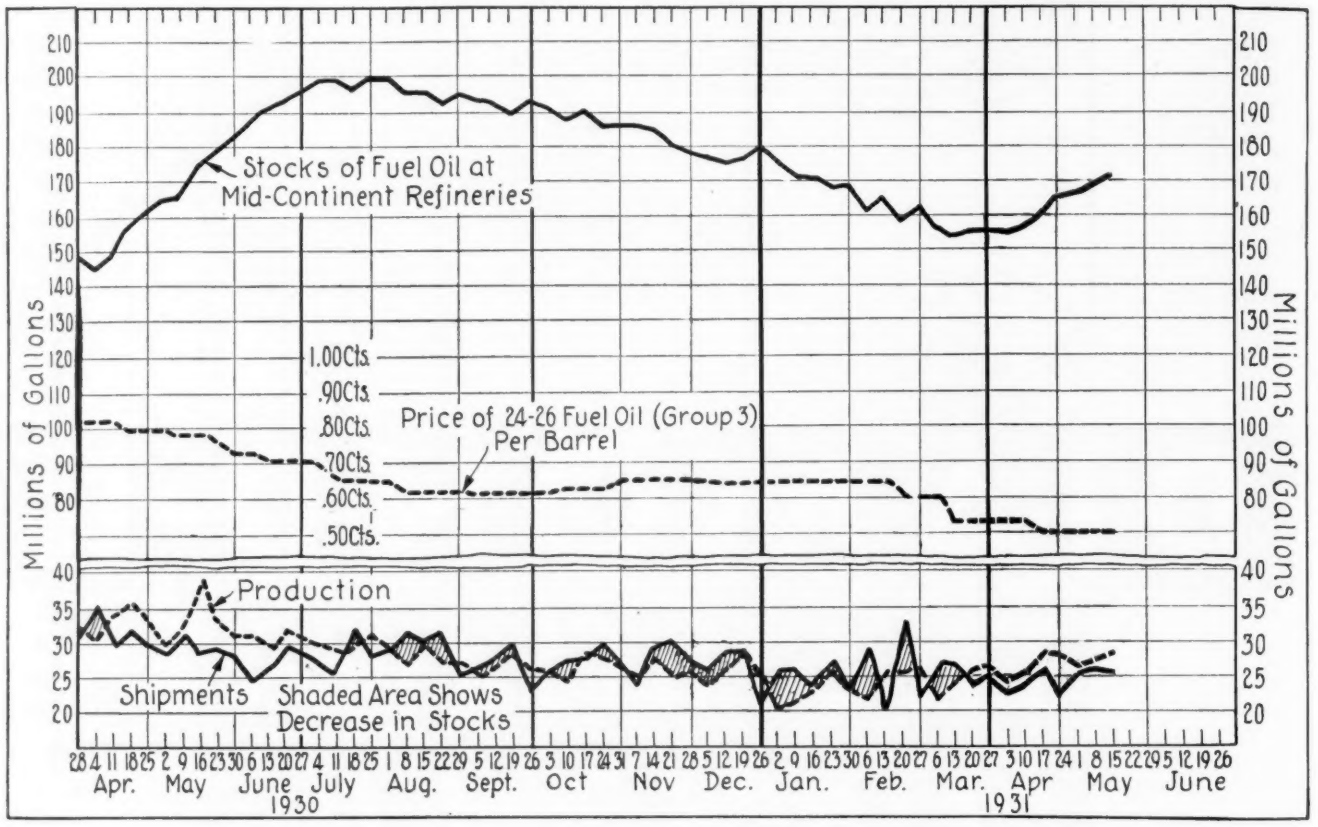
Distributing Offices:

New York • Springfield, Mass. • Philadelphia • Atlanta • Detroit • Chicago • St. Paul • Kansas City

29

Barometer of Mid-Continent Refinery Market—Week Ending May 15

Charted Course of Prices, Production, Shipments, Stocks of Principal Refined Products, Week by Week, From Reports Made by 93 Plants to National Petroleum News



California Refinery Market

Inquiry Active for Intercoastal Shipments

LOS ANGELES, May 16 ALTHOUGH California bulk market suppliers reported numerous inquiries for cargoes of gasoline from East coast buyers, there was a decided absence of actual sales.

One trader reported an inquiry for a cargo of gasoline, with special anti-knock specifications, had been filled at the Gulf at a price that would net back approximately 3.50 cents on the Pacific coast. This figure was regarded by the local trade as the level necessary to attract actual business, but it appeared doubtful if such a quotation could be obtained except on firm offer.

However, another exporter reported a quotation of 3.25 cents for a cargo of U. S. Motor gasoline, that, at latest reports, had not been accepted.

Inquiry was reported good for cased kerosine. One supplier reported an inquiry for 20,000 cases the past week for delivery to India, and other business appeared in the offing. A major company was reported to be delivering approximately 100,000 cases per month under contract to Indian buyers. Although the present price was not available, the same company was understood to have received prices of $1.35 and $1.55 for standard white, and water while kerosine respectively, during 1930.

In the domestic tank car market, gasoline continued exceptionally easy with quotations for instate consumption at 3 to 3.75 cents, exclusive of tax, and for delivery out of the state at 3.25 to 4 cents. Major refiners were reported asking 3.75 to 4 cents for the latter type of business.

Retail prices in the Los Angeles Basin continued to range from 7.50 to 10.50 cents with the average about 8.50 to 9 cents. Practically all major refiners were either posting "competitive price" signs or were protecting their dealers with special discounts. However, the tendency was to protect only those dealers in which the company has an actual financial interest.

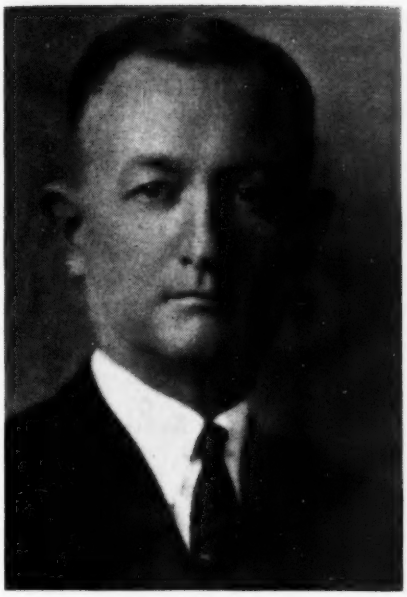
Warm weather caused a let-up in the demand for natural gasoline that resulted in lower tank car quotations. Generally the spread for this commodity was 2.50 to 3 cents with some business going at 0.25 cent above and below this range.

Quotations for fuel oil continued at $0.45 to $0.55 for Santa Fe Springs or Signal Hill grades with the price shaded to $0.35 for Playa del Rey residuum. Slack demand for kerosine caused quotations to fall off to 4 to 4.75 cents. Kerosine stock was reported available at 2 to 2.25 cents.

Pennsylvania Markets

Market Generally Unchanged

CLEVELAND, May 18.—Little change was noted in the Pennsylvania market in the week ended May 16. Gasoline shipments were showing a steady increase and motor oil movement continued brisk. Burning oils generally were quiet. Prices for most products were steady.



W. H. Henszey

Acewood Men Form New Marketing Company

LOS ANGELES, May 14.—Organization was recently announced of the Refiners Marketing Co., Ltd., with headquarters in the Richfield Oil building, Los Angeles. The company plans national distribution of all grades of Pennsylvania and Mid-Continent petroleum products and carmes as its slogan "Everything in Petroleum Products,—carloads, tank-cars, cargoes—for domestic or export."

Wm. H. Henszey, former executive and a director of Acewood Petroleum Sales Corp. and Union Petroleum Co., is president and general manager of the new company. For more than 10 of his 21 years in the oil business he has been on the Pacific Coast, first as manager of Union Petroleum Co. of California and later as Pacific Coast manager for the Acewood unit.

Two other executives Edward Bush and C. F. Cheminant, also former Acewood and Union Petroleum Co. executives, hold the positions of vice-president and secretary-treasurer, respectively, of the Refiners Marketing Co. Mr. Bush is in charge of the company's eastern office at Oil City, Pa.

Railroad Fuel Men to Meet

CLEVELAND, May 18.—The International Railway Fuel Association will hold its annual meeting at the Hotel Sherman, Chicago, Sept. 15 and 16. The organization studies efficiency in the purchase, handling and use of railway fuel.

Our imports of mineral wax in 1930 totaled 12,500,000 pounds, or 2,500,000 pounds more than in 1929.

THEY WILL TELL THEM APART BY THEIR COLORS!

Now that it has been deemed prudent to have a range of grades of gasoline to meet the demands of all motorists, it is just as necessary, for a number of good reasons, to use Color as a means of distinguishing those several grades.

And in addition, DYKEM COLORS, which are available in a complete array of shades, make the gasoline bright and attractive.

Write for prices and samples of those Colors you prefer.

DYESTUFFS & CHEMICALS, INCORPORATED
11th & Monroe Sts., St. Louis, Mo.

There is a constant market in used equipment

Take advantage of the savings possible by buying what you need or selling what you don't need.

An advertisement in our classified section costs only $4 an inch with a border and display heading. Without a border 10 cents a word, minimum charge $3.

Tell them your needs in next week's issue.

PENNSYLVANIA
MOTOR OILS
Buyers Specifications or Ours
Pennsylvania Quality at
Lowest Prices in Years
Write or Wire
INDUSTRIAL OIL CORP.
Warren, Pa.

Eastern Domestic Markets

Gasoline Prices Reduced 0.5 to 0.75 Cent

Staff Special
NEW YORK, May 16

A GENERAL downward revision of posted prices for gasoline in tank car lots occurred along the eastern seaboard during the week ended May 16. Several major companies reduced their spot prices 0.5 to 0.75 cent at distributing points from Portland in the northern seaboard markets to Jacksonville in the south.

The New York harbor, Philadelphia, and Baltimore gasoline markets were steady at 5.75 cents. Kerosine prices were down 0.5 to 0.75 cent in those markets. Tank car lots of petroleum spirits and V. M. & P. naphtha were 0.5 cent lower at New York harbor.

The demand for regular U. S. Motor gasoline at New York harbor held up fairly well in spite of a week of rain and cold weather. By far the majority of purchases in the open market were at 5.75 cents; price shading was almost totally lacking. Sales of barge lots were at 5.50 cents and quotations under that price were few and far between.

The Philadelphia and Baltimore markets were steady at 5.75 cents and demand for U. S. Motor gasoline was reported good by most sellers. A minimum of price shading was noted in these markets.

Reports on the status of the kerosine market were in conflict. According to some traders water white kerosine was freely available at 5.25 cents, but others were of the opinion that the 5.50-cent price was more representative in the light of the fact that refinery operations had been adjusted to meet the off-season demand for this product. Sales were made at both 5.25 and 5.50 cents in the Baltimore, Philadelphia, and New York markets.

Posted prices for gasoline were reduced 0.5 cent in the principal New England markets, and what little spot activity there was moved at around the lower prices. The new schedules were Portland, 6.50 cents: Boston and Providence, 6.25 cents—all prices f.o.b. terminals and refineries. Jobbers were said to be taking out a maximum volume of material under their contracts. The retail markets of the major companies resumed a normal appearance. The practice of offering special prices for cash was discontinued, and the posted retail prices became the criterion for cash as well as credit transactions.

Gulf Coast Markets

Lower Prices Fail to Attract Buyers

Staff Special
NEW YORK, May 16

THE reduction is cargo prices of gasoline and kerosine a week ago failed to attract any sizeable business to American suppliers the past week. Prices for those products in cases were reduced 5 to 10 cents for cargo lots. The bulk of the export trading the past week was done in crude oil.

There was one cargo transaction in the market. An English company purchased a quantity of gasoline somewhat different from the regular export grades at a price of approximately 4 cents. This material was said to be satisfactory to export buyers and was the first cargo purchased in the open market for export from the Gulf for some time. Two purchasers were buying natural gasoline in the Mid-Continent for export storage at the Gulf.

The prices asked by most suppliers were unchanged and in the absence of firm offers they were non-committal about making specific selling prices. There were no inquiries from foreign buyers reported.

Gas oil was available at 2.875 cents in a quiet market. Regular U. S. Motor and 64-66, 375 end point in cases were offered at $1.50 and $1.60 per case respectively. These prices are 10 cents lower than last week. The two grades of kerosine were available 5 cents per case lower, at $1.35 and $1.25 for the water white and prime white, respectively.

Venezuela Crude

There was little or no activity in the market for Venezuela crude. Offers were at $0.70 per barrel, f.o.b. deepwater in the Lake Maracaibo region but those conversant with this market stated that buying was at standstill pending developments in the East Texas field.

Panuco Crude

One cargo of Panuco crude was sold the past week at $0.45 per barrel, f.o.b. Tampico. This was the only activity reported in this market.

Gulf Lubes Low

HOUSTON, May 16.—Gulf coastal lubricant markets are described by manufacturers as fairly constant at recently lowered price levels announced a week ago. Demand is slack but approximately normal for the season.

Ohio Has Law to Prevent Self Serve Stations

CLEVELAND, May 19.—Self service at filling stations will be illegal in Ohio after Aug. 9. Governor George White has signed a bill permitting only the owner or operator of a filling station, or a bona fide employe, to deliver gasoline or any other inflammable liquid to be used as a motor fuel into the tank of an automobile or other container at filling stations.

"The new law does not prevent the use of automatic dispensing equipment," said Hubert B. Fuller, general counsel of the Ohio Petroleum Marketers Association. "It merely requires that automatic equipment or any other dispensing equipment shall be operated only by the owner of the station or a bona fide employe. The law is a safety measure to prevent the hazards that attend promiscuous handling of motor fuels."

Violation entails a fine of $10 to $250 and each day self service is permitted constitutes a separate offense.

Late Market Changes

CHICAGO—On May 19 Standard Oil Co. of Indiana reduced Stanolind Blue gasoline prices at the following points in the following amounts: Chicago, tank wagon, 1 cent, service station ¼-cent; Minneapolis, service station only, 1.2 cents; and South Bend, service station only, cut 9/10-cent.

These changes are not reflected in the tank wagon table in this issue, because of the fact that prices in that table are those in effect Monday, May 18.

Wax Markets

Trading Quiet

NEW YORK, May 16.—Both the New York and New Orleans wax markets were comparatively quiet the past week. A few domestic sales of scale waxes were reported at unchanged prices. Several inquiries from the United Kingdom were in the market for parcels of 10 to 20 tons of scale wax.

Prices for yellow and white scale were pretty well pegged at 1.95 and 2 cents per pound, respectively. Prices for the refined grades also were generally unchanged.

Oil Trademarks For Copyright

THE following are trademark applications pertinent to our field pending in the United States Patent office which have been passed for publication and are in line for early registration unless opposition is filed promptly. For further information address National Trade-Mark Company, Barrister Building, Washington, D. C. trademark specialists.

As an additional service feature to its readers, this journal gladly offers to them an advance search free of charge on any mark they may contemplate adopting or registering. You may communicate with the Editor of this Department, or send your inquiry direct to the National Trade-Mark Company, stating that you are a reader of this journal.

"LIPAN." Ser. No. 310,110. Continental Oil Co., Ponca City, Okla. For lubricating oil.

"NAVAJO." Ser. No. 310,112. Continental Oil Co., Ponca City, Okla. For lubricating oil.

"RAMIL." Ser. No. 310,113. Continental Oil Co., Ponca City, Okla. For lubricating grease.

"REDIND." Ser. No. 310,114. Continental Oil Co., Ponca City, Okla. For lubricating oil.

"RODUS." Ser. No. 310,115. Continental Oil Co., Ponca City, Okla. For lubricating grease.

"SUJIND." Ser. No. 310,116. Continental Oil Co., Ponca City, Okla. For lubricating grease.

"UTE." Ser. No. 310,119. Continental Oil Co., Ponca City, Okla. For lubricating oil.

"ZUNI." Ser. No. 310,120. Continental Oil Co., Ponca City, Okla. For lubricating oil.

"PERPETUOIL." Ser. No. 310,303. Reo Motor Co. of New England, doing business as Pierre Oil Co., Boston, Mass. For lubricating oils.

Representation of a circle of green within a rectangle of green. Ser. No. 308,120. Merco Nordstrom Valve Co., San Francisco, Calif. For lubricating grease compound.

"OCONOC." Ser. No. 310,121. Continental Oil Co., Ponca City, Okla. For lubricating grease.

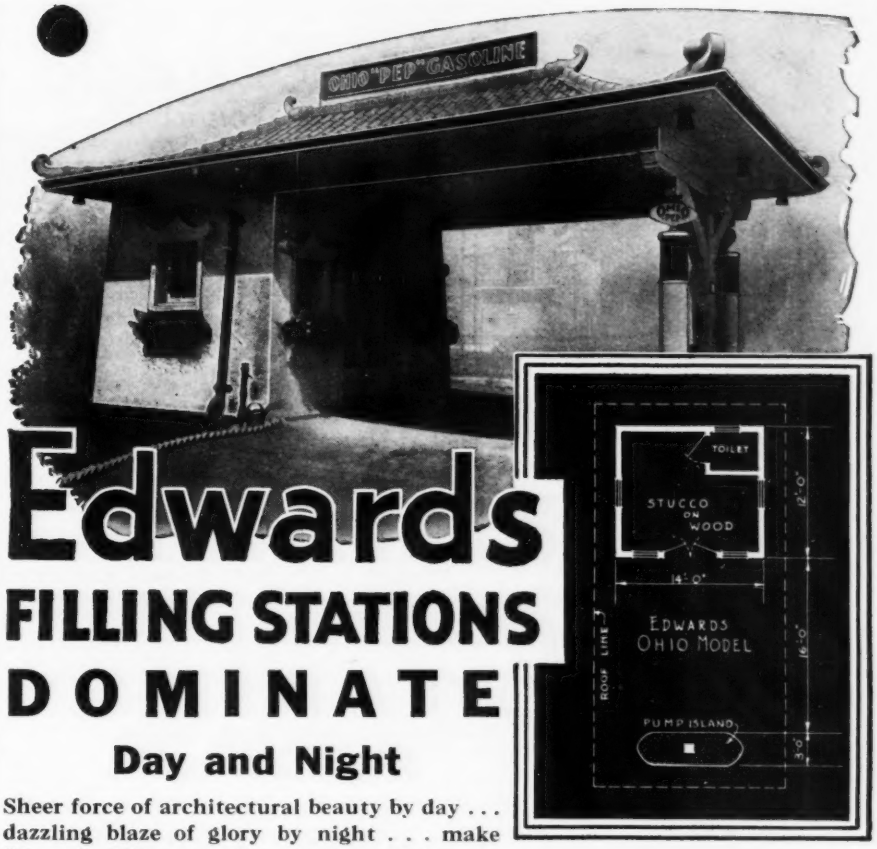
"ZOIL." Ser. No. 310,041. The Pennzoil Co., Los Angeles, Calif. For lubricating oils and greases.

"LYCASOL." Ser. No. 311,326. Deutsche Calypsol-Gesellschaft Mit Beschrankter Haftung, Dusseldorf, Germany. For lubricating oils and greases.

"COKETTES." Ser. No. 311,290. Standard Oil Company of California, Wilmington, Del., and San Francisco, Calif. For petroleum coke.

Representation of an Indian with a hatchet. Ser. No. 310,035. H. S. Aasen, doing business as Sioux Oil Co., Winger, Minn. For gasoline, kerosine, lubricating oils, and greases.

"ARO," and representation of an arrow running thru it. Ser. No. 305,600. The Aro Equipment Corporation, Bryan, Ohio. For portable pressure lubricating equipment.



Edwards
FILLING STATIONS DOMINATE
Day and Night

Sheer force of architectural beauty by day . . . dazzling blaze of glory by night . . . make Edwards Filling Stations business getters in any locality.

Edwards Filling Stations are wind, weather, fire and lightning proof. They are permanent as well as beautiful.

The pleasing lines of the Ohio Model illustrated above are characteristic of many Edwards attractive and inexpensive Filling Stations, Garages, Hangars, Parking Lot Buildings, etc. Thousands of installations in all parts of the country.

Let us help you plan for immediate profit and expansion. Write for complete Service Station Catalog. Send dimensions of your lot. We make no charge for preliminary layout or estimate.

EDWARDS METAL SPANISH TILE ROOFING

. . . is the crowning oriental touch to the beautiful Ohio Model shown above. Ideal for every type of structure, for impressive architectural effects, on buildings, canopies, pump shelters, etc. Get our prices.

THE EDWARDS MANUFACTURING CO.

524-544 Eggleston Ave. **Cincinnati, Ohio**

OIL PRICE HANDBOOKS

HAVE you a complete record of REFINERY prices; TANK WAGON markets; EXPORT prices; CRUDE prices—

For quick reference and comparison with today's prices?

The OIL PRICE HANDBOOK is the only complete record of oil markets for a whole year, compiled in one handy volume for quick reference. Cloth bound—marginal index—9" x 6"—146 pages.

Oil Price Handbook for 1930 . . . $7.50
" " " for 1929 . . . $7.50
" " " for 1928 . . . . . $5
" " " for 1927 . . . . $5
" " " for 1926 . . . . . $5
" " " for 1925 } $6
" " " for 1924 }

Send for these OIL PRICE HANDBOOKS now, before they are all gone.

National Petroleum News, 735 Penton Bldg., Cleveland, Ohio

Complete Seaboard Market

(Export Markets for whole year given in OIL HANDBOOK. Each volume carries refinery, tank wagon, crude and export markets—complete for the whole year)

Eastern Domestic Market

(Prices for tank car lots, f. o. b. refinery or seaboard terminal, representing majority of sales and quotations. Prices shown below do not include inspection tax levied in Florida and South Carolina.)

	Prices May 18	Prices May 11	Prices May 4
U. S. MOTOR GASOLINE			
New York harbor	5.75 – 6.00	5.75 – 6.00	5.75 – 6.125
Portland district	6.50	7.00	7.00
Boston district	6.25	6.75	6.75
Providence district	6.25	6.75	6.75
Philadelphia district	5.75 – 6.00	5.75 – 6.00	6.00 – 6.25
Baltimore district	5.75 – 6.00	5.75 – 6.00	6.00 – 6.25
Norfolk district	6.00	6.50	6.50
Charleston district	6.00	6.50	6.50
Savannah district	6.00	6.50	6.50
Jacksonville district	6.00	6.50	6.50
CALIFORNIA U. S. MOTOR GASOLINE			
New York harbor	5.75 – 6.00	5.75 – 6.00	6.00 – 6.25
Philadelphia district	5.75 – 6.00	5.75 – 6.00	6.00 – 6.25
Baltimore district	5.75 – 6.00	5.75 – 6.00	6.00 – 6.25
‡DOMESTIC AVIATION GASOLINE			
New York harbor	9.50 –12.00	10.00 –12.00	10.00 –12.00
Philadelphia	9.50 –12.00	10.00 –12.00	10.00 –12.00
Baltimore	11.00 –12.00	11.00 –12.00	11.00 –12.00
Boston	11.50 –13.00	11.50 –13.00	11.50 –13.00

‡Prices are based on U. S. Gov't. specifications or better. Present Gov't. specifications require distillation range of 5% recovery at not more than 167°F. and not less than 122°F.; 50% recovery at 221°; 90% at 311°; 96% at 347° end point 374°F. Gasoline of fighting grade specifications in some instances sells at a premium over domestic aviation grade. Prices represent majority of quotations.

WATER WHITE KEROSINE			
New York harbor	5.25 – 5.50	5.75	5.75
Philadelphia district	5.25 – 5.50	6.00	6.00
Baltimore district	5.25 – 5.50	6.00	6.00
GAS OIL: 28-34 Gravity			
New York harbor	4.00 – 4.50	4.00 – 4.50	4.50
Boston district	4.00 – 4.50	4.00 – 4.50	4.50
FURNACE OIL: 36-40 Gravity			
New York harbor	5.00 – 5.50	5.00 – 5.50	5.50
Boston district	5.00 – 5.50	5.00 – 5.50	5.50
GRADE C BUNKER OIL (Lighterage 5c per bbl. additional)			
New York harbor	$0.95	$0.95	$0.95
Boston district	$0.95	$0.95	$0.95
DIESEL OIL			
New York harbor	$1.65	$1.65	$1.75

†Nominal.

New York Export Market

(Lubricating oils are per gal. in bbls. F.a.s. New York)

	May 18	May 11	May 4
CYLINDER OILS (Pennsylvania Products)			
Bright stock, No. 8 color	24.00 –25.00	24.00 –25.00	24.00 –25.00
Bright stock, No. 6½ color diluted	23.00 –24.00	23.00 –24.00	23.00 –24.00
600 D filtered	22.00 –25.00	22.00 –25.00	22.50 –25.00
600 Warren E filtered	18.00 –21.00	18.00 –21.00	18.00 –21.00
600 stm. refd. unfiltered	14.50 –16.00	14.50 –16.00	14.50 –16.00
650 stm. refd. unfiltered	17.00 –20.00	17.00 –20.00	17.00 –20.00
600 flash steam refined	17.50 –20.00	17.50 –20.00	17.50 –20.00
630 flash, steam refined	23.00 –25.00	23.00 –25.00	23.00 –26.00
RED PARAFFIN OILS (Vis. 100°)			
300 vis. No. 6½ color	17.00 –20.00	17.00 –20.00	17.00 –20.00
250 vis. No. 6 color	16.50 –17.50	16.50 –17.50	16.50 –17.50
200 vis. No. 6 color	14.75 –17.00	14.75 –17.00	14.75 –17.00
PALE PARAFFIN OILS (Vis. 100°)			
230 vis. No. 3¼ color	21.50	21.50	21.50
180 vis. No. 3¼ color	18.00 –20.00	18.00 –20.00	18.00 –20.00
100 vis. No. 2¼ color	12.50 –15.00	12.50 –15.00	12.50 –15.00

Wax Market

(Melting points are A.M.P. method. Prices in cents per pound, f.a.s. carload lots.)

NEW YORK	May 18	May 11	May 4
124-126 Yellow crude scale	1.95	1.95	1.95
122-124 White crude scale	2.00	2.00	2.00
124-126 White crude scale	2.00	2.00	2.00
123-125 Fully refined	3.125– 3.25	3.125– 3.25	3.125– 3.25
125-127 Fully refined	3.125– 3.25	3.125– 3.25	3.125– 3.25
128-130 Fully refined	3.25 – 3.375	3.25 – 3.375	3.25 – 3.375
130-132 Fully refined	3.50 – 3.625	3.50 – 3.625	3.50 – 3.625
133-135 Fully refined	4.25 – 4.375	4.25 – 4.375	4.25 – 4.375
135-137 Fully refined	4.625	4.625	4.625
NEW ORLEANS			
124-126 Yellow crude scale	1.95	1.95	1.95
122-124 White crude scale	2.00	2.00	2.00
124-126 White crude scale	2.00	2.00	2.00
123-125 Fully refined	3.125– 3.25	3.125– 3.25	3.125– 3.25
125-127 Fully refined	3.125– 3.25	3.125– 3.25	3.125– 3.25
128-130 Fully refined	3.25 – 3.375	3.25 – 3.375	3.25 – 3.375
130-132 Fully refined	3.50 – 3.625	3.50 – 3.625	3.50 – 3.625
133-135 Fully refined	4.25 – 4.375	4.25 – 4.375	4.25 – 4.375

Gulf Coast Bulk Market

(Prices are f. o. b. Gulf oil terminals representing sellers' opinions covering bulk shipments of 20,000 barrels or more, for export and / or coastwise shipment unless otherwise noted.)

GASOLINE	Prices May 18	Prices May 11	Prices May 4
U. S. Motor	4.25	4.25 – 4.50	4.50
60-62, 400 e.p.	4.50	4.50 – 4.75	5.00
61-63, 390 e.p.	4.75	4.75 – 5.00	5.25
64-66, 375 e.p.	5.00	5.00 – 5.25	5.50
U. S. Motor, (cases cargoes)	$1.50	$1.60	$1.60
64-66, cases (cargoes)	$1.60	$1.70 –$1.72	$1.70 –$1.72
KEROSINE			
44 water white	4.75 – 5.00	4.75 – 5.00	5.00
41-43 prime white	3.75 – 4.00	3.75 – 4.00	4.00
Water white, cases (cargoes)	$1.35	$1.40	$1.40
Prime white, cases (cargoes)	$1.25	$1.30	$1.30
GAS & BUNKER OILS			
*26-30 translucent gas oil	2.875– 3.00	3.00	3.00
*30 plus translucent gas oil	2.875– 3.00	3.00	3.00
Grade C bunker oil, for ships' bunkers, per bbl.	$0.80	$0.80	$0.80
Grade C bunker oil, per bbl. in cargoes	$0.60 –$0.65	$0.60 –$0.65	$0.60 –$0.65

*Less than ½ of 1% sulphur.
†Represents sales only.

MEXICAN CRUDE AND BUNKER OILS (f. o. b. Steamer, Tampico)			
Heavy Panuco crude taxes to be paid, per bbl.	$0.45	$0.46	$0.46
Grade C bunker oil for bunkering, taxes paid, per bbl.	$0.80	$0.80	$0.90
VENEZUELA CRUDE			
F. o. b. deepwater, Lake Maracaibo region	$0.70	$0.70 –$0.76	$0.70 –$0.76

SOUTH TEXAS LUBRICATING OILS (Viscosity at 100°F cold test 0 Tanker, f. o. b. Gulf oil terminals.)

100 vis. No. 2 unfiltered pale	4.75 – 5.50	4.75 – 5.50	4.75 – 5.75
200 vis. No. 3 unfiltered pale	6.75 – 7.50	6.75 – 7.50	6.75 – 8.25
300 vis. No. 3 unfiltered pale	7.75 – 8.50	7.75 – 8.50	7.75 – 9.50
500 vis. No. 3½ unfiltered pale	8.75 – 9.50	8.75 – 9.50	8.75 –10.50
750 vis. No. 4 unfiltered pale	10.25 –11.00	10.25 –11.00	10.25 –12.75
1200 vis. No. 4 unfiltered pale	14.00 –14.75	14.00 –14.75	14.00 –16.00
200 vis. No. 5-6 red oil	6.00 – 6.75	6.00 – 6.75	6.00 – 6.75
300 vis. No. 5-6 red oil	7.00 – 7.75	7.00 – 7.75	7.00 – 7.75
500 vis. No. 5-6 red oil	7.50 – 8.25	7.50 – 8.25	7.50 – 9.00
750 vis. No. 5-6 red oil	9.25 –10.00	9.25 –10.00	9.25 –11.50
1200 vis. No. 5-6 red oil	13.00 –13.75	13.00 –13.75	13.00 –15.00

Pacific Export Market

(Quotations are at seaboard, Los Angeles, in cargo lots, cents per gallon, except where otherwise noted.)

	May 18	May 11	May 4
Gasoline, U. S. Motor, 53-55 Gravity	3.375– 4.00	3.50 – 4.25	3.50 – 4.25
Gasoline, U. S. Motor-blends and special cuts	4.25 – 4.75	4.25 – 4.75	4.25 – 4.75
Gasoline, 400 e.p. blend	4.50 – 5.00	4.50 – 5.00	4.50 – 5.00
Gas Oil, 30-34 per bbl.	$0.85 –$0.90	$0.85 –$0.90	$0.85 –$0.90
Diesel Oil, 27 plus, per bbl	$0.85 –$0.90	$0.85 –$0.90	$0.85 –$0.90
Bunker oil, 14-18 per bbl.	$0.55 –$0.70	$0.55 –$0.70	$0.55 –$0.70
Fuel oil, 14-18 per bbl.	$0.55 –$0.80	$0.55 –$0.80	$0.55 –$0.80
Kerosine, 38-40 w.w., 125-150 flash, per gal.	4.25 – 4.75	4.25 – 4.75	4.25 – 4.75
Cased Goods			
Gasoline, U. S. Motor	$1.45 –$1.55	$1.45 –$1.55	$1.45 –$1.55
Gasoline, 400 e.p. blend	$1.55 –$1.65	$1.55 –$1.65	$1.55 –$1.65
Kerosine, 38-40 w.w., 125-150 flash	$1.40 –$1.45	$1.40 –$1.45	$1.40 –$1.45

Tanker Rates

(Approximate tanker freight rates to Continental ports, in shillings per ton of 2240 pounds, British sterling; to American ports, cents per barrel.)

	May 18	
	Crude &/or Fuel	Refined Oil &/or Spirits
Calif. to U. K. or Continental ports*	21	18
Gulf to U. K. or Continental ports*	10-11	†10
North Atlantic to U. K. or Continental ports*	9/6	†8/6
Calif. to North Atlantic ports (not E. of N. Y.)	$0.45-$0.50	$0.45-$0.50
Gulf to North Atlantic ports (not E. of N. Y.)**	14-15	15

*Continental ports in the range between Bordeaux and Hamburg, both inclusive. **Venezuela loading same rate, for Tampico 2c to 3c per bbl. additional. †Two ports discharged.

He didn't think much of the Grease Business until we persuaded him to try the Graigrene Resale Plan

—then he sold four times as much grease—at double the price

(Name of jobber on request)

Here's still another case of grease sales neglected—for lack of a good selling plan.

This jobber thought the grease business was no good—but he was open to argument. He was willing to try a plan that seemed sound and business-like and that had a record of success with other jobbers

And Did He Clean Up!

—selling a car load of Graigrene from the middle of March to the first of June—a 400% increase—was only part of the story. For he got *practically double his previous price.*

Working this plan increased oil and gas business too.

We Can Help You Too, If You'll Just Mail The Coupon

The Graigrene plan is complete. It gives you a lubricant—the finest it is possible to make. It gives you VOLUME—PRICE—PROFIT—that you'll think is impossible until you see the dollars rolling in.

There are grease sales waiting for you and your dealers. This plan tells you how to get them. Better write us NOW. No obligation—just send us the coupon or drop us a postal card or letter.

GRAIGRENE

[PRONOUNCED GREY-GREEN]

RESALE PLAN

Viscosity Oil Company
1103 West 37th Street, Chicago

Send me full details of your Resale Method for increasing jobbers' and dealers' profits on grease from 100% to 500%.

Company..... Name.....

Address..... City.....

Tank Wagon, Service Station Markets for Gasoline and Kerosine

(OIL PRICE HANDBOOK has t.w. and s.s. markets for a whole year, arranged for quick reference)

These Prices in Effect May 18, 1931, as Posted by Principal Marketing Companies

S.O.NEW JERSEY TERRITORY

	Gasoline Total				Oil
	T.W.	Tax	T.W.	S.S.	T.W
Atlantic City, N. J.	10.7	3	13.7	15.7	11.5
Newark, N. J.	9.7	3	12.7	14.7	10.5
Annapolis, Md.	11.2	4	15.2	16.2	11
Baltimore, Md.	10.4	4	14.4	15.4	9.5
Cumberland, Md.	12.2	4	16.2	17.2	12
Washington, D. C.	10.9	2	12.9	13.9	10.0
Danville, Va.	12.0	5	17	18	11.8
Norfolk, Va.	10.5	5	15.5	16.5	10.0
Petersburg, Va.	11.5	5	16.5	17.5	11.3
Richmond, Va.	10.9	5	15.9	16.9	10.7
Roanoke, Va.	12.2	5	17.2	18.2	12
Charleston, W. Va.	11.7	4	15.7	16.7	11.5
Keyser, W. Va.	12.3	4	16.3	17.3	12.1
Parkersburg, W. Va.	10.4	4	14.4	15.4	10.2
Wheeling, W. Va.	11.6	4	15.6	16.6	11.4
Charlotte, N. C.	12.5	6	18.5	19.5	11
Hickory, N. C.	12.8	6	18.8	19.8	12.6
Mt. Airy, N. C.	12.7	6	18.7	19.7	12.5
Raleigh, N. C.	12.4	6	18.4	19.4	12.2
Salisbury, N. C.	12.7	6	18.7	19.7	12.5
Charleston, S. C.	10.5	6	16.5	17.5	10.3
Columbia, S. C.	12.4	6	18.4	19.4	12.2
Spartanburg, S. C.	12.7	6	18.7	19.7	12.5

Note: 2c per gallon discount off retail t.w. price of gasoline to dealers thru S. O. New Jersey territory, except Maryland and Washington, D. C. where discount is 3c.

S. O. NEW YORK

Greater New York City:					
Boroughs of Manhattan, Bronx, Queens & Kings	11.3	2	13.3	15.3	10
Borough of Richmond	11.7	2	13.7	15.7	12
Albany, N. Y.	12.6	2	14.6	16.6	10.5
Buffalo, N. Y.	11.8	2	13.8.	15.8	10
Rochester, N. Y.	12	2	14	16	10
Syracuse, N. Y.	12.8	2	14.8	16.8	10.5
Boston, Mass.	11.5	3	14.5	16.5	11
Augusta, Me.	12.8	4	16.8	18.8	12.
Manchester, N. H.	12.4	4	16.4	18.4	11
Burlington, Vt.	13.3	4	17.3	19.3	11
New Haven, Conn.	12.6	2	14.6	16.6	10
Providence, R. I.	11.7	2	13.7	15.7	11

Discounts on gasoline: 2c per gal. off posted t.w. price to dealers, thru territory, except 3c to dealers inNew York City, effective Feb. 20, 1931.

ATLANTIC REFINING

Pittsburgh, Pa.	12	*	12	17	12
Philadelphia, Pa.	12	*	12	17	12
Allentown, Pa.	12	*	12	17	12
Erie, Pa.	12	*	12	17	10
Scranton, Pa.	12	*	12	17	12
Altoona, Pa.	12	*	12	17	12
Dover, Del.	12	3	15	17	12
Wilmington, Del.	12	3	15	17	12
Boston, Mass.	11.5	3	14.5	16.5	11
Springfield, Mass.	12.5	3	15.5	17.5	11
Worcester, Mass.	12.3	3	15.3	17.3	11
Fall River, Mass.	12.1	3	15.1	17.1	11
Providence, R. I.	11.7	2	13.7	15.7	11
Hartford, Conn.	12.5	2	14.5	16.5	10
New Haven, Conn.	12.6	2	14.6	16.6	10
Atlantic City, N. J.	11.2	3	13.2	16.2	11.5
Camden, N. J.	10.3	3	13.3	15.3	10.6
Trenton, N. J.	10.7	3	13.7	15.7	11
Annapolis, Md.	11.7	4	15.7	16.7	11
Baltimore, Md.	10.9	4	14.9	15.9	9.5
Hagerstown, Md.	12.4	4	16.4	17.4	11.7
Richmond, Va.	11.4	5	16.4	17.4	10.7
Wilmington, N. C.	11.4	6	17.4	18.4	10.4
Brunswick, Ga.	12	6	18	20	**14
Jacksonville, Fla.	9	6	15	17	12

Note: 2c per gal. discount off t.w. price of gasoline on sales to dealers; discount to commercial accounts under contract for one year in accordance with Code of Ethics.

*3-cent state tax is collected by retail dealer and paid by him directly to state.

**Georgia kerosine prices include 1c state tax.

S. O. KENTUCKY

Lexington, Ky.	12	5	17	18	12
Louisville, Ky.	11	5	16	17	11
Paducah, Ky.	12	5	17	18	11
Covington, Ky.	11	5	16	17	11
Jackson, Miss.	10	5	15	13	11.5
Vicksburg, Miss.	11	5	16	18	11.5
Birmingham, Ala.†‡	13	4	17	19	13
Mobile, Ala.‡	13	4	17	19	13
Montgomery, Ala.*	13	4	17	17	13.5
Macon, Ga.	12	6	18	18	†13
Atlanta, Ga.	10	6	16	18	*†12.5

Latest Changes in Tank Wagon Prices

Gasoline

S. O. New Jersey—Spartanburg, S. C. added to table. T.w. price of 18.7c and s.s. price of 19.7c, including 6c tax, effective May 6.

S. O. Indiana—Stanolind Blue s.s. only cut 2.6c, Des Moines, to 9.9c, including 3c tax, **May 9.**

Stanolind Blue s.s. only cut 3c, Sioux City, to 9.1c, including 3c tax, **May 9.**

A 75,000 gallon bracket added to Q.D.A., **May 11.** Discounts off t.w. price, in quantities over 75,000 gallons, thru territory; Ethyl gasoline, 4c; Red Crown, 3.5c; Stanolind Blue, 2c.

S. O. Louisiana—T.w. and s.s. cut 2c, Memphis, to 13c and 14c respectively, including 5c tax, **May 9.**

Continental Oil—T.w. and s.s. up ½c thru Utah, to cover tax increase to 4c, **May 12.**

T.w. and s.s. cut 2.5c, Boise, to 18c and 21c respectively, including 5c tax, **May 13.** Allowance of 2c at time of delivery discontinued.

S. O. California—Tank truck and retail prices cut 2c, Phoenix, to 15.5c and 18c, respectively, **May 11.**

Tank truck and retail prices cut 1c, Spokane, to 16c and 19c respectively, **May 11.**

Tank truck and retail prices cut 1c, Portland, to 9.5c, **May 13.**

Aviation Gasoline

S. O. New Jersey—T.w. cut ½c, Newark, to 14.9c, **May 13.**

Continental Oil—S.s. only up ½c, thru Utah, to cover tax increase to 4c, **May 12.**

T.w. cut 2.5c, Boise, to 21c, including 5c tax, **May 13.**

Kerosine

S. O. New Jersey—Spartanburg, S. C. added to table. Kerosine t.w. price of 12.5c effective **Sept. 24, 1930.**

			Gasoline Total		Oil
	T.W.	Tax	T.W.	S.S.	T.W.
Augusta, Ga.	12	6	18	20	†14
Savannah, Ga.	12	6	18	18	†12
Jacksonville, Fla.	9	6	15	17	12
Miami, Fla.	12	6	18	20	13
Tampa, Fla.	11	6	17	17	12
Pensacola, Fla.**	10	6	16	18	13

Note: Net price of gasoline to dealers is 2c under posted t.w. price thru S. O. Kentucky territory.

*Local privilege tax of 1 cent on gasoline and ½ cent on kerosine at Montgomery included.

†Georgia kerosine prices include 1c state tax.

**Both tank wagon prices include 1c city tax at Pensacola which went into effect Oct. 15, 1926.

‡Mobile gasoline prices include 1c city tax.

‡‡Birmingham gasoline prices include 1c city tax.

*†3c discount off t.w. price of oil at Atlanta, meeting competition.

S. O. INDIANA

‡(Red Crown Gasoline)

Chicago, Ill.	11	3	14	14	9
Decatur, Ill.	11.4	3	14.4	14.4	9
E. St. Louis, Ill.	10.7	3	13.7	13.7	8.2
Joliet, Ill.	11.4	3	14.4	14.4	9
Peoria, Ill.	11.4	3	14.4	14.4	9
Quincy, Ill.	11.2	3	14.2	14.2	8.8
Springfield, Ill.	11.4	3	14.4	14.4	9
Indianapolis, Ind.	11.3	4	15.3	15.3	10.1
Evansville, Ind.	11.1	4	15.1	15.1	9.9
South Bend, Ind.	11.4	4	15.4	15.4	10.2
Detroit, Mich.	11.8	3	14.8	14.8	10.7
Grand Rapids, Mich.	11.7	3	14.7	14.7	10.6
Saginaw, Mich.	11.9	3	14.9	14.9	10.8
Green Bay, Wisc.	11.6	4	15.6	15.6	9.4
Madison, Wisc.	11.3	4	15.3	15.3	9.1
Milwaukee, Wisc.	11.1	4	15.1	15.1	8.9
La Crosse, Wisc.	12.2	4	16.2	16.2	10
Minneapolis, Minn.	12.2	3	15.2	15.2	9.9
Duluth, Minn.	12.5	3	15.5	15.5	9.9
Mankato, Minn.	12.1	3	15.1	15.1	9.7
Des Moines, Ia.	11.5	3	14.5	14.5	9.3
Davenport, Ia.	11.5	3	14.5	14.5	9.3
Sioux City, Ia.	11.1	3	14.1	14.1	8.9
Mason City, Ia.	11.5	3	14.5	14.5	9.3
St. Louis, Mo.	*10.9	2	12.9	12.9	8.3
Kansas City, Mo.	†11.9	2	13.9	13.9	7.6
St. Joseph, Mo.	†11.5	2	13.5	13.5	7.5
Fargo, N. D.	13.9	3	16.9	16.9	11.9
Grand Forks, N. D.	14.2	3	17.2	17.2	12.2
Minot, N. D.	13.9	3	16.9	16.9	11.9
Pierre, S. D.	12	4	16	16	10.4
Huron, S. D.	12.3	4	16.3	16.3	10.7
Wichita, Kans.	9.8	3	12.8	12.8	7.8
Bartlesville, Okla.	8	5	13	16	7.5

‡Stanolind Blue prices are normally 2c under those shown above. At the following points, these prices are below normal on Stanolind Blue:

(Stanolind Blue Gasoline)

			Total	
	T.W.	Tax	T.W.	S.S.
Chicago	9	3	12	11.25
St. Louis	*8.9	2	10.9	9.9
St. Joseph, Mo.	†9.5	2	11.5	10.9
Detroit, Mich.	9.8	3	12.8	11.9
Wichita, Kan.	6.8	3	9.8	8.8

*Includes city tax of ½c.

†Includes city tax of 1c.

Discounts: Q.D.A., effective May 11, 1931, on gasoline:

To re-sellers, thru territory, except Chicago:

	Under 75,000 Gals. Off S.S. Price	75,000 Gals. and Over Off T.W. Price
Ethyl gasoline	3c	4c
Red Crown gasoline	2.5c	3.5c
Stanolind Blue	1c	2c

In Chicago, in any quantity, discounts are 4c per gal. on Ethyl gasoline, 3.5c on Red Crown, and 2c on Stanolind Blue, discounts being off service station prices in quantities up to 75,000 gallons, and off t.w. price in quantities of 75,000 gallons and over.

To consumers, thru territory, except Chicago:

	1,000 to 75,000 Gallons Off T.W. Price	75,000 Gals. and Over Off T.W. Price
Ethyl gasoline	3c	4c
Red Crown gasoline	2.5c	3.5c
Stanolind Blue	1c	2c

In Chicago, in quantities over 1,000 gallons: Ethyl gasoline, 4c; Red Crown 3.5c; Stanolind Blue, 2c, all discounts being off tank wagon price.

Above prices include these inspection fees on both gasoline and kerosine, per gallon: Alabama, 1/40c on gasoline, 1/2c kerosine; Arkansas, 1/20c on both; Florida, 1/8c on both; Illinois, 3/100c on both; Indiana, 2/25c to 1/2c on both; Kansas, 3/50c on both; Louisiana, 1/32c on gasoline; Minnesota, 3/50c on both; Missouri, 1/50c to 1/2c on both; Nebraska 3/100c on both; North Carolina, 1/4c on both; North Dakota, 1/20c on both; Oklahoma, 4/25c on both; South Carolina 1/8c on both; South Dakota, 1/10c on both; Tennessee, 2/5c on gasoline and 1/2c to 4/5c on kerosine; Wisconsin, 1/25c on both.

Kerosine inspection fees only, per gallon: Iowa 7/100c; Michigan, 1/5c to 4/5c per gal.

Tank Wagon, Service Station Markets for Gasoline and Kerosine

These Prices in Effect May 18, 1931, as Posted by Principal Marketing Companies

S. O. OHIO

	Gasoline T.W.	Tax	Gasoline Total T.W.	Gasoline S.S.	Oil T.W.
Ohio statewide	12	4	16	17	13
Defiance, Hancock, Marion and Wyandot counties	12	4	16	16	13
Williams county	11	4	15	15	13

Note: Discount on gasoline to dealers and commercial consumers generally thru Ohio is 2c per gal. off above t.w. prices except in counties where prices are below statewide schedule, discount is generally 3c.

Discount on kerosine to dealers and commercial consumers is 3c per gal. off t.w. price thru Ohio.

S. O. NEBRASKA

Omaha, Neb.	8.9	4	12.9	12.9	9.25
McCook, Neb.	12	4	16	17.75	10.75
Norfolk, Neb.	11.75	4	15.75	16.75	9.75
North Platte, Neb.	12.75	4	16.75	17.75	10.5
Scottsbluff, Neb.	12	4	16	16	10.25

Note: Discounts: Ethyl gasoline, 3c off normal service station price; Red Crown gasoline, 2.5c off s.s. price, effective April 20, 1931.

S. O. LOUISIANA

	Gasoline Posted Retail T.W.	Tax	Gasoline Total Posted Retail T.W.	Gasoline Posted Retail S.S.	Oil T.W.
Little Rock, Ark.	10.5	6	16.5	17.5	11
Alexandria, La.	10.5	*6	16.5	17.5	†12
Baton Rouge, La.	10.5	5	15.5	16.5	†12
New Orleans, La.	9.5	*6	15.5	16.5	†12
Lake Charles, La.	10.5	*6	16.5	17.5	†12
Shreveport, La.	10.5	5	15.5	16.5	†12
Lafayette, La.	10.5	*6	16.5	17.5	†12
Bristol, Tenn.	13.5	5	18.5	19.5	14
Chattanooga, Tenn.	12.5	5	17.5	18.5	13
Knoxville, Tenn.	13	5	18	19	13.5
Nashville, Tenn.	12	5	17	18	12.5
Memphis, Tenn.	8	5	13	14	10

Note: Discounts in S. O. La. territory: To dealers and commercial consumers from the tankwagon, 2c per gal. off posted retail t.w. price.

***Lake Charles, Alexandria, New Orleans and Lafayette gasoline tax includes 5c state tax and 1c parish tax. New Orleans kerosine price includes 1c parish tax in addition to 1c state tax.**

†Kerosine price in Louisiana includes 1c state tax.

MAGNOLIA PETROLEUM

	Gasoline T.W.	Tax	Gasoline Total T.W.	Gasoline S.S.	Oil T.W.
Muskogee, Okla.	8	5	13	16	8
Oklahoma City	6	5	11	13	8
Tulsa, Okla.	8	5	13	13	8
Fort Smith, Ark.	10.5	5	15.5	16.5	11
Little Rock, Ark.	10.5	6	16.5	17.5	11
Texarkana, Ark.*	12	4	16	16	11
Dallas, Tex.	11	4	15	18	10
Fort Worth, Tex.	8	4	12	14	10
Houston, Tex.	10	4	14	18	11
San Antonio, Tex.	10	4	14	18	10
El Paso, Tex.	10	4	14	18	12

***Within city of Texarkana, the state tax on gasoline is 4c per gal. conforming with the Texas state tax. In this district outside of the city the 5c Arkansas tax applies.**

CONTINENTAL OIL

Denver, Colo.	11	4	15	18	12.5
Pueblo, Colo.	10	4	14	17	12
Grand Junc., Colo.	12	4	16	19	14.5
Casper, Wyo.	11	4	15	18	10
Cheyenne, Wyo.	12	4	16	19	11.5
Butte, Mont.	12	5	17	20	16
Helena, Mont.	15	5	20	23	16
Salt Lake City, Utah	13.5	4	17.5	20.5	16
Boise, Ida.	13	5	18	21	18
Twin Falls, Ida.	*15.5	5	20.5	..	18
Albuquerque, N. M.	11	5	16	20	14

*Less 3.5c on gasoline at time of delivery at Twin Falls.

S. O. CALIFORNIA

	State Tax	Gasoline Tank Truck	Gasoline *Retail	Oil T.W.
San Francisco, Cal.	3	8	11	15.5
Los Angeles, Cal.	3	7.5	10.5	15.5
Fresno, Cal.	3	8	11	17
Phoenix, Ariz.	5	15.5	18	20
Reno, Nev.	4	16	20	19
Portland, Ore.	4	9.5	12.5	16.5
Seattle, Wash.	5	10	13	16.5
Spokane, Wash.	5	16	19	20.5
Tacoma, Wash.	5	10	13	16.5

Note: No discounts off above gasoline prices; tank truck prices are those to resale trade; wholesale prices are generally 6c above tank truck prices, except at Phoenix 1c; Reno and Spokane 4c.

*Retail prices are those of Standard Stations, Inc., marketing subsidiary of the Standard Oil Co. of California.

CANADA

(Per Imperial Gallon, which is 1.2 American Gallons)

	Gasoline T.W.	Tax	Gasoline Total T.W	Gasoline S.S	Oil T.W.
ONTARIO					
Toronto	16	5	21	24.5	17
Ottawa	17	5	22	25.5	18
North Bay	20	5	25	30.5	21
Fort William	19.5	5	24.5	28	19.5
Border Cities, including Windsor	16	5	21	24.5	15
MANITOBA					
Winnipeg	18	5	23	27	18.5
SASKATCHEWAN					
Regina	22	5	27	31	22
ALBERTA					
Edmonton	23	5	28	31.5	23
Calgary	19.5	5	24.5	28	19.5
BRITISH COLUMBIA					
Vancouver	21	5	26	28	22
QUEBEC					
Montreal	17	5	22	25.5	18
Quebec City	19	5	24	27.5	20
Three Rivers	19	5	24	27.5	20
NEW BRUNSWICK					
St. John	18.5	5	23.5	27.5	20.5
Moncton	18.5	5	23.5	27.5	20.5
NOVA SCOTIA					
Halifax	18.5	5	23.5	27.5	20.5
PRINCE EDWARD ISLAND					
Charlottetown	18.5	5	23.5	27.5	20.5

Note: In districts surrounding these points 1c additional is added to city price.

NAPHTHA PRICES

	Oleum Spirits	V.M.&P. Naphtha	Cleaner Naphtha
Chicago	10.7	12.7	14.2
Detroit	13.4	14.9	15.7
Kansas City	†11.9	†13.4	†14.2
Milwaukee	12.4	*15.9	*16.7
Minneapolis	**16.7	**18.2	**19
St. Louis	11.6	13.1	13.9
New York		14	20
Boston		17	20

*Includes 2c state tax. †Includes 1c city tax.
**Includes 3c state tax.

Petroleum Spirits (Solvent)

Tank Cars (F.o.b. refinery or seaboard terminal)	
New York harbor	9.50
Philadelphia district	10.00
Providence	10.50
Tank Wagon or Steel Barrels	
New York City	14
Syracuse	17
Rochester	17
Buffalo	16
Providence	17
Boston	17
Bridgeport	15
Newark	16
Philadelphia	14
Lancaster	17
Altoona	17
Baltimore	17

Note: 2c off above t.w. prices to large buyers in some instances.

Aviation Gasoline Prices

Following are tank wagon prices of aviation gasoline in principal marketing territories showing state and municipal taxes:

S. O. NEW JERSEY

Prices in Effect May 18, 1931

	T.W.	Tax	Total T.W.
Newark, N. J.	14.9	*	14.9
Baltimore, Md.	16.2	4	20.2
Washington, D. C.	17	2	19

***New Jersey road tax of 3c does not apply on aviation gasoline, exemption being claimed at time of purchase.**

All above prices are on Stanavo Aviation Gasoline.

COLONIAL BEACON OIL CO.

New York City	17.5	2	19.5
Boston	19	2	23

S. O. PENNSYLVANIA

Philadelphia, Pa.	16	3	19
Pittsburgh, Pa.	16	3	19
Altoona, Pa.	16	3	19

S. O. OHIO

Thru Ohio	15	4	19

Discounts given by S. O. Ohio: For airport delivery only; 2,000 gals. or over per month, 1c per gal.; 6,000 gals. or over per month, 2c; 12,000 gals. and over per month, 3c; 24,000 gals. and over per month, 4c.

S. O. INDIANA

	T.W.	Tax	Total T.W.
Chicago	14	3	17
Indianapolis, Ind.	14.3	4	18.3
Detroit, Mich.	14.8	3	17.8
Milwaukee, Wis.	14.1	2	16.1
Minneapolis, Minn.	15.2	3	18.2
St. Louis, Mo.	13.4	2.5	15.9
Kansas City, Mo.	13.9	3	16.9
Fargo, N. D.	16.9	3	19.9
Huron, S. D.	15.3	4	19.3
Wichita, Kan.	12.8	3	15.8

In S. O. Indiana territory, buyer pays state and city taxes on aviation gasoline, and if he can get a refund from the state, he does so. Kansas City tax of 3c includes 1c city tax; St. Louis tax of 2.5c includes ½c city tax.

S. O. LOUISIANA

New Orleans, La.	18	6	24
Nashville, Tenn.	20	5	25
Memphis, Tenn.	19	5	24

2c per gal. discount off above posted retail t.w. prices to dealers and commercial consumers.

S. O. NEBRASKA

Omaha	16.25	4	20.25

2c per gal. refund to reseller.

CONTINENTAL OIL CO.

Denver, Colo.	14	4	18
Cheyenne, Wyo.	15	4	19
Helena, Mont.	18	5	23
Salt Lake City, Utah	16.5	4	20.5
Albuquerque, N. M.	15	5	20
Boise, Ida.	16	5	21

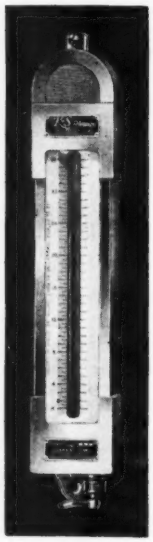
S. O. CALIFORNIA

Phoenix, Ariz.	17.5	4	21.5
Los Angeles, Cal.	16.5	3	19.5
San Francisco, Cal.	17	3	20
Reno, Nev.	21	4	25
Portland, Ore.	17.5	4	21.5
Seattle, Wash.	17.5	3	20.5
Spokane, Wash.	21.5	3	24.5

Note: 4c per gallon added to t.w. price, in S. O. California territory, to customers taking delivery direct into the fuel tank of planes.

THE K-S TELEGAGE FOR LIQUID MEASUREMENT
ACCURATE - DEPENDABLE

NET PROFIT IS WHAT COUNTS



Cut down your losses! Modernize your plant! Make use of the devices which enable you to "cut corners" and reduce operating cost. With today's lower prices this must be done or that factor which we know as net profit will be greatly reduced if not wholly eliminated.

You who are interested in the petroleum industry have a major problem in your liquid handling and control. This "liquid cash" of yours must be carefully guarded and precisely inventoried in order that you may know just where you stand.

The Telegage System of Liquid Measurement by

1. Giving a constant inventory
2. Checking inage and outage
3. Eliminating the risk of climbing tanks for sticking or taping
4. Eliminating the loss of vapors due to open hatches for sticking
5. Reducing the fire hazard caused by open hatches
6. Checking purchases
7. Eliminating "penciling"

and in other ways is doing its part toward reducing operating costs.

Now is a good time to invest in equipment which will increase your net profit. Write today for further information.

K-S TELEGAGE

KING-SEELEY CORPORATION

ANN ARBOR MICHIGAN

Offices in

Chicago, New York, Cleveland, Philadelphia, Detroit, St. Louis, and Milwaukee, Toronto

Manufacturing Associates

London, England and Paris, France

FROM ALL SHIPPING POINTS:

CRUDE OIL

Gasoline—Kerosene—Distillates—Furnace Oil
Painters and Cleaners Napthas—Natural Gasoline
Coastal Lubricating Oils—Bright Stocks—Neutral
Asphalt—Road Oil—Flux Oil—Petroleum Coke.

One Car or One Train—Wire, Write, Telephone

PRIMROSE PETROLEUM CO., INC.

(Incorporated under the Laws of the State of Texas, 1916)

DALLAS, TEXAS

Greasing

26 articles published in National Petroleum News the past 12 months have been devoted exclusively to telling how to sell lubrication service, how to grease cars properly and profitably. How to build greasing stations, how grease is sold and other grease problems, are also discussed in these stories.

Here are references to these 26 articles:

1931

Modernizing lube department keeps customers coming in — April 22, p. 69
Personal inspection sells lubrication jobs — April 15, p. 88
Grease It, Please! Survey of greasing jobs at Indianapolis and Cleveland stations — April 15, p. 73; March 25, p. 25
Auto makers to merchandise lubrication to car dealers — March 18, p. 33
Lube oil research planned by Mid-Continent refiners — March 18, p. 31
Lubricant performance improved by narrow operating temperature range — March 11, p. 32-D
Free greasing keeps servicemen on toes — Feb. 25, p. 76
Oiliness in lubricants is function of surface tension — Feb. 4, p. 63
S.A.E. numbers applied .o rear axle lubes — Jan. 28, p. 30

1930

Auto dealers get warmer on lubrication business — Dec. 3 p. 25
Lubrication built business for one station operator — Nov. 26 p. 64
New greasing station has five lifts, 14 pressure, 10 hand guns — Oct. 15, p. 91
"Certified lubrication" includes training in own school, lube charts, special merchandising problems — Sept. 24, p. 161
Socony's list of lubrication points on all cars — Sept. 24, p. 169
Lube oil resistance to decomposition — Aug. 13, p. 63
Typical analyses of lube oils — Aug. 13, p. 65
Advantages of new consistometer in testing greases, oils — Aug. 6, p. 63
Shell's school on lubrication — Aug. 6, p. 95
Lubritory nets 10% profit on tires without stock — June 25, p. 99
Lubricating oil evaluation by work factor method — June 11, p. 63
Grease plant has straight line operation — June 11, p. 93
Lubrication school trains men to head department — June 4, p. 95
Doubles lube sales by changing package — May 28, p. 99
A.P.I. seeks delay of grease meter regulations — May 7, p. 28
Lubrication specialist trains attendants with lectures — Apr. 23, p. 86

Back copies of any of the above issues are 25c a copy. On issues that are exhausted, photostats will be furnished at 40c per page. Libraries in the larger cities generally keep back files of National Petroleum News complete.

National Petroleum News
Main Office: 1213 West Third St.
Cleveland, Ohio

Crude Oil Prices (in Effect May 18, 1931)

Crude prices for the whole year in OIL PRICE HANDBOOK published annually

EASTERN FIELDS

(Posted by Joseph Seep Purchasing Agency)

Bradford—Alleghany district (posted by Tide Water Pipe Co., Ltd.) (Effective Apr. 23, 1931) $2.00
Penna. Grade Oil in National Transit Lines (Effective Apr. 23, 1931) *1.75
Penna. Grade Oil in Southwest Penna. Pipe Lines (Effective Apr. 27, 1931) 1.60
Penna. Grade Oil in Eureka Pipe Lines (West Virginia) (Effective Apr. 23, 1931) 1.50
Penna. Grade Oil in Buckeye Pipe Lines (Macksburg, O.) (Effective Apr. 23, 1931) 1.25
Corning Grade in Buckeye Pipe Lines (Ohio) (Effective March 11, 1931) 0.80
Somerset oil in main system of Cumberland Pipe Line (posted by Ashland Refining Co.) (Effective March 6, 1931) $0.75
Ragland Grade in Cumberland Pipe Lines (Kentucky) (Effective Jan. 9, 1929) $0.60

*Oil run prior to July 1, 1929 is 5c less per bbl.

(Posted by Stoll Oil Refining Co.)

Oil City, Ky., oil in Stoll lines (Effective April 1, 1931) $0.60

MICHIGAN

(Posted by Dixie Oil Co.)

Traverse and Dundee (Muskegon), effective March 5, 1931, same gravity and price schedule as Stanolind posts in Oklahoma, Kansas and North Texas, which see below.

(Posted by Pure Oil Co.)

Midland, Midland County (March 13, 1931) $0.75

CENTRAL STATES FIELDS

Posted by Ohio Oil Co.

Effective March 6, 1931

Wooster	$0.99	Princeton	$0.80
Lima	0.90	Illinois	0.80
Waterloo	1.20	West Kentucky	0.75
Indiana	0.50		

CANADIAN CRUDE

Posted by Imperial Oil Refineries, Ltd.

Effective Oct. 28, 1930

Petrolia $1.50
Oil Springs 1.57

OKLAHOMA, KANSAS and †NORTH TEXAS

Prices of *Stanolind Crude Oil Purchasing Co.

(In Oklahoma, Kansas, †North and North Central Texas)

Effective March 5, 1931

Below 29	$0.43	35-35.9	$0.57
29-29.9	0.45	36-36.9	0.59
30-30.9	0.47	37-37.9	0.61
31-31.9	0.49	38-38.9	0.63
32-32.9	0.51	39-39.9	0.65
33-33.9	0.53	40 and above	0.67
34-34.9	0.55		

*Prairie Oil & Gas withdrew postings in Oklahoma, Kansas and Texas, Jan. 1, 1931.

On March 5, 1931 these crude purchasers met above prices: Continental Oil Co., Eason Oil Co., Mid-Continent Petroleum Corp., Standard Oil Co. of Kansas, Tidal Refining Co., White Eagle Oil & Refining Co.

On March 10, 1931, these met Stanolind: Humble and The Texas Co.

†Except these North Texas districts, prices for which see below: Wichita Falls, Wilbarger, Foard, Montague, and Cooke counties.

North Texas: Wichita, Wilbarger, Foard, Montague, Cooke Counties

Effective April 21, 1931

Below 29	$0.33	35-35.9	$0.47
29-29.9	0.35	36-36.9	0.49
30-30.9	0.37	37-37.9	0.51
31-31.9	0.39	38-38.9	0.53
32-32.9	0.41	39-39.9	0.55
33-33.9	0.43	40 and above	0.57
34-34.9	0.45		

Above prices posted by Stanolind also in West Central Texas, including Young, Palo Pinto, Stephens and Eastland counties.

Humble Oil & Refining Co.

(In East, North and North Central Texas

Effective March 10, 1931

Effective March 10, Humble pays same prices as Stanolind Crude Oil Purchasing Co. pays in Oklahoma, Kansas, etc., in these East Texas, North and North Central Texas fields: Sabine, Mexia, Powell, Boggy Creek, Richland, Wortham and Currie.

Effective April 21, Humble posted in Ranger, North Texas, Moran and Cooke Counties, same prices as Stanolind in North Texas, Wichita, Wilbarger, etc., which see above.

Magnolia Petroleum Co.

(In Oklahoma, Kansas, †North, *East and East Central Texas)

Effective March 5, 1931

Magnolia posts same prices in all three states as Stanolind, in Oklahoma and Kansas, except these lower grades:

Below 26	$0.40	27-27.9	$0.42
26-26.9	0.41	28-28.9	0.43

*Effective March 26, 1931, in East Texas.

†Except these North Texas fields, where prices are same as Humble and Stanolind in the same districts: Ranger, Clay, Montague, Wichita, Wilbarger, Young, Comanche, Eastland, Erath and Stephens, Tex., effective April 23, 1931.

Carter Oil Co.

(Oklahoma and Kansas)

March 10, 1931, same prices as Stanolind in Oklahoma and Kansas, which see.

PANHANDLE TEXAS

Humble Oil & Refining Co.

Effective April 21, 1931

Hutchinson and Carson Counties:

Below 35	$0.30	38-38.9	$0.38
35-35.9	0.32	39-39.9	0.40
36-36.9	0.34	40 and above	0.42
37-37.9	0.36		

Gray County

Below 35	$0.33	38-38.9	$0.41
35-35.9	0.35	39-39.9	0.43
36-36.9	0.37	40 and above	0.45
37-37.9	0.39		

Above prices met by Magnolia and The Texas Co. on April 23 in Hutchinson, Carson and Gray counties.

Wheeler County: Posted by Magnolia Pet. Co. Effective Apr. 10, 1930. Humble withdrew Wheeler county postings Apr. 10, 1930.

Below 30	$0.755	37-37.9	$1.11
30-30.9	0.805	38-38.9	1.145
31-31.9	0.855	39-39.9	1.18
32-32.9	0.905	40-40.9	1.215
33-33.9	0.955	41-41.9	1.25
34-34.9	1.005	42-42.9	1.285
35-35.9	1.04	43-43.9	1.32
36-36.9	1.075	44 and above	1.355

WEST TEXAS and NEW MEXICO

Humble Oil & Refining Co.

Effective April 21, 1931

Pecos and Winkler, all grades $0.35
Crane, Upton, Crockett, Ector, Howard and Glasscock Counties, all grades $0.30
Lea County, N. Mex. $0.325

April 23, 1931, The Texas Co. same prices in Crane, Upton, Winkler and Lea counties as Humble.

April 23, Magnolia same prices as Humble in Winkler, Crane, Upton, Howard, Glasscock and Mitchell counties.

SOUTH and SOUTHWEST TEXAS

(Posted by Humble Oil & Refining Co.)

All Effective April 21, 1931

Mirando $0.60
Salt Flat 0.53
Darst Creek 0.53
Pettus, Bee County 0.75

(Posted by Magnolia Petroleum Co.)

Effective April 23, 1931

Corsicana Heavy $0.38
Luling 0.38

(Posted by The Texas Co.)

Markham $0.50

NORTH LOUISIANA—ARKANSAS FIELDS

Prices of Standard Oil Co. of Louisiana

Caddo, Homer, Haynesville, Bull Bayou, El Dorado, Crichton, De Soto, Sabine, Cotton Valley, Sarepta and Carterville.

Effective March 10, 1931

Below 29	$0.43	35-35.9	$0.57
29-29.9	0.45	36-36.9	0.59
30-30.9	0.47	37-37.9	0.61
31-31.9	0.49	38-38.9	0.63
32-32.9	0.51	39-39.9	0.65
33-33.9	0.53	40 and above	0.67
34-34.9	0.55		

Smackover, all grades $0.45
Bellevue 0.45
*Urania, La. (April 21, 1931) 0.50
†East El Dorado (Calion) 0.45

*Posted by Louisiana Oil Refining Corp.

†Posted by Magnolia Petroleum Co.

March 10, 1931, The Texas Co. same schedule in Louisiana as Standard.

March 10, Magnolia met Standard schedule in Louisiana-Arkansas fields except it posts the same low grades in La.-Ark. as in Mid-Continent.

Stephens, Arkansas

Louisiana Oil Refining Corp., and Atlantic Oil Producing Co.

Effective March 10, 1931

Below 29	$0.38	29 and above	$0.41

GULF COASTAL

Posted by Humble Oil & Refining Co.

Effective April 21, 1931

Grades A	$0.70	29-29.9	$0.69
Grades B:		30-30.9	0.71
Below 25	0.60	31-31.9	0.73
25-25.9	0.61	32-32.9	0.75
26-26.9	0.63	33-33.9	0.77
27-27.9	0.65	34-34.9	0.79
28-28.9	0.67	35 and above	0.81

On April 23, 1931, The Texas Co. posted same prices on Grades A and B Gulf Coast crude as Humble, except its schedule on Grades B goes to top grade of 40 and above, at 91 cents; a 2 cent differential applies for each gravity from Humble's 35 and above.

Fields classified as A and B are Spindletop, Goose Creek, Hull, Liberty, Sour Lake, West Columbia, Orange, Boling, Humble, Pierce Junction, Sugarland, Refugio county, and Raccoon Bend. All other fields are Grades A only.

Specifications for Grade "A" crude: Gravity; 25° and below, at 60° F: Viscosity: not less than 100 seconds at 100° F. Saybolt.
Sulfur: not over 4%.

Grade "B" includes all Coastal crude which does not meet the test for "A" grades.

Texas Co. Posts East Texas Crude

NEW YORK.—On May 15 The Texas Co. posted in East Texas the same prices it posts on Mid-Continent and North Texas crudes. Its schedule begins with below 29 gravity at 43 cents, plus 2-cent differential for each succeeding degree of gravity, up to top grade of 40 and above, which is 67 cents.

Another independent posting prices in that field recently is the Atlas Pipe Line Co., Inc which on May 11 posted a flat price of 40 cents per barrel for crude in the Lathrop, Kilgore and Joiner areas. The Atlas company was organized earlier in the year when it acquired the Shreveport- El Dorado Pipe Line Co., Inc. and the Shreveport-El Dorado Refining Co. It is a subsidiary of Spartan Refining Co., Inc. at Shreveport.

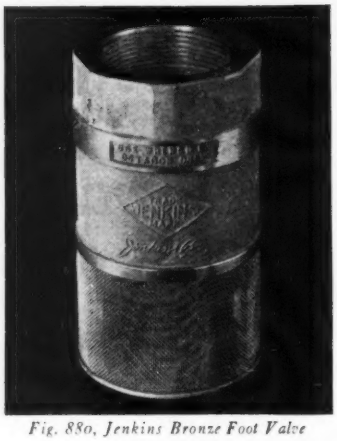


Fig. 880, Jenkins Bronze Foot Valve

NOT ONE DROP GETS BY

WHEN a Jenkins Valve is installed on the suction pipe of a filling station pump, that is the beginning of long, accurate pump performance . . . the end of costly excavating for foot valve repair or replacements.

Jenkins Gasoline Foot Valve and Angle Check Valve, stay drop-tight. Not one drop gets by the special gasoline-resisting disc in a Jenkins. Even under conditions of excessive traffic vibration, Jenkins seat perfectly, operate smoothly, and keep the pump always primed for instant, correct delivery.

Complete details about Jenkins Gasoline Foot Valves and Angle Check Valves are contained in Form 146. Let us send you a copy.

JENKINS BROS.
80 White Street, New York, N. Y.

JENKINS

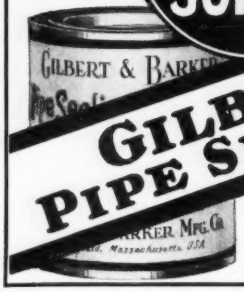
absolutely drop-tight

GASOLINE FOOT VALVES & ANGLE CHECK VALVES

Fig. 882, Jenkins Bronze Angle Check Valve
Fig. 881, Jenkins Iron Body Angle Check Valve

FOR TIGHTER JOINTS

Three Handy Sizes:
⅛ pint 15c
1 pint 75c
1 quart $1.45
(Postage extra)



GILBERT & BARKER PIPE SEALING COMPOUND

Leaks in gasoline pipe lines can be serious. Use Gilbert & Barker Pipe Sealing Compound. Makes every coupling, tee or elbow tight as a weld. No stock losses. No costly overhauling. Approved by Underwriters.

Order direct from
GILBERT & BARKER MFG. COMPANY, SPRINGFIELD, MASS.

SKILLED SUPERVISION

Guarantees the Quality of Gulf Products

COASTAL AND PARAFFINE CRUDES
GASOLINE—LUBRICATING OILS
NAPHTHA—GAS—OILS
WAX—PETROLEUM COKE
CYLINDER—ENGINE—CORDAGE

Gulf Refining Company

General Sales Offices:
PITTSBURGH, PA.

District Sales Offices: New York, Boston, Philadelphia, Louisville, Atlanta, Houston, New Orleans

Crude Oil Prices (in Effect May 18, 1931)

(Prices are per barrel at the well)

(Crude Oil Prices for the whole year in OIL PRICE HANDBOOK published annually)

ROCKY MOUNTAIN FIELDS
(Posted by Midwest Refining Co.)
(Salt Creek prices effective March 5, 1931)

Salt Creek, below 29°	$0.43
" " 29-29.9	0.45
" " 30-30.9	0.47
" " 31-31.9	0.49
" " 32-32.9	0.51
" " 33-33.9	0.53
" " 34-34.9	0.55
Salt Creek 35-35.9	0.57
" " 36-36.9	0.59
" " 37 and above	0.61

(Posted by Ohio Oil Co. and Midwest Refining Co.)

Elk Basin	$0.90
Grass Creek light	0.90
Big Muddy	0.65
Lance Creek	0.98
Rock Creek	0.66
Mule Creek	1.20
Rex Lake	1.10
Pondera	1.45
†Osage	0.50
†Cat Creek, Mont.	0.90
Sunburst, Mont.	1.55
†Hogback, N. Mex. (April 1, 1931)	0.90

†Posted by Midwest Refining Co. Midwest also buys Grass Creek light and Elk Basin. Others are prices of Ohio Oil Co.

CALIFORNIA CRUDE
†Standard Oil Co. of California
Effective March 31, 1931

Gravity	Signal Hill, Seal Beach, Alamitos Heights, Huntington Beach, Inglewood, Olinda-Brea Canon, Athens-Rosecrans-Dominguez, Torrance, Richfield, Whittier, LaHabra, Montebello, Coyote Hills and Santa Fe Springs	Elwood Terrace	Newhall, McKittrick, Kern River, Midway-Sunset, Elk Hills, Buena Vista Hills, Lost Hills, Coalinga and Wheeler Ridge	*Santa Paula	*Orcutt
14-19.9	$0.65	F.O.B. Ship	$0.55	$0.60	$0.55
20-20.9	.65		.53	.58	.53
21-21.9	.62		.51	.56	.51
22-22.9	.59		.49	.53	.49
23-23.9	.56		.47	.50	.47
24-24.9	.53		.45	.47	.45
25-25.9	.50		.43	.44	.43
26-26.9	.47		.41	.41	.41
27-27.9	.44		.39	.38	.39
28-28.9	.41		.37	.35	.37
29-29.9	.38		.35	...	.35
30-30.9	.35		...	...	...
31-31.9	.35		...	...	...
32-32.9	.35		...	...	...
33-33.9	.35		...	...	...
34 and above	.35	$0.35	...	...	...

*Posted by Union Oil Co. of California, effective March 30, 1931.

†Postings on Kettleman Hills crude discontinued by Standard, March 10, 1931; on Playa del Rey, March 31, 1931.

REFINERS' and COMPOUNDERS' SUPPLIES

Following are average market prices for materials used by refiners and compounders effective on the date shown.

Refiners' Supplies

	May 18	May 11
Soda Ash Light 58% bags, cwt.	$1.20-1.38	$1.20-1.38
Silicate of Soda 60 deg. drums, cwt.	$1.75-1.90	$1.75-1.90
Silicate of Soda 40 deg. tank cars, cwt.	$0.70	$0.70
Silicate of Soda 40 deg. drums, cwt.	$1.00	$1.00
Sal Soda wks.	$0.90-1.20	$0.90-1.20
Caustic Soda 76% solid, cwt.	$2.25-2.50	$2.25-2.50
Sulfuric Acid 60 deg. tank cars, f. o. b. shipping point per ton	$11.00-12.50	$11.00-12.50
Sulfur, flowers of, cwt.	$3.10-4.00	$3.10-4.00
Liquid Chlorine, tank cars, wks, lb.	1.75	1.75

Compounders' Supplies

	May 18	May 11
Vegetable Oils		
Linseed carloads, spot, lb.	8.80	9.00
Tanks, spot	8.20	8.40
Soya Bean, Tank, coast, lb.	7.10	7.10
Oleic Acid		
Distilled, tanks, lb.	7.50	7.50
Distilled, bbls, lb.	8.75	8.75
Saponified, tanks, lb.	7.75	7.75
Saponified, bbls, lb.	8.625	8.625
Lard Oils		
Prime Winter Strained, lb.	13.00	13.00
Extra Winter Strained, lb.	9.75	9.75
Extra, lb.	9.50	9.50
Extra No. 1, lb.	8.75	8.75
No. 1, lb.	8.50	8.50
No. 2, lb.	8.25	8.25
Tallow oil, lb.	8.00	8.00
Neatsfoot Oil		
Pure, bbls, lb.	11.25	11.25
Extra, bbls, lb.	9.00	9.00
No. 1 bbls, lb.	8.75	8.75
Cold Pressed, lb.	16.00	16.00
Fish Oils		
Menhaden Oil		
Light Pressed, gal.	38–40	38–40
Light Pressed, tank cars, N. Y., gal.	30–32	30–32
Yellow bleached, gal.	42–44	42–44
Whale, extra winter bleached, gal.	75	75
Naval Stores		
Steam, distilled turpentine, N. Y., gal.	51	51
Steam, distilled turpentine, Savannah, gal.	49	49
Gum turpentine, N. Y., gal.	53	53
Gum turpentine, f. o. b. cars Savannah, gal.	46	46
Wood Rosin, N. Y., bbl.	$5.10	$5.10
Wood Rosin F, Savn'h, bbl.	$5.00	$5.00
Gum Rosin B, N. Y., bbl.	$4.80	$4.80
Gum Rosin B, f. o. b. cars Savannah, bbl.	$4.05	$4.05
Rosin oil, pure, gal.	54	54
Rosin, oil, compounded, gal.	48	48
Pine Tar		
Kiln burnt, bbl.	$10.00-11.00	$10.00-11.00
Retort, bbl.	$11.50-12.50	$11.50-12.50
Alcohol		
Denatured Formula 5, in tanks, per gal.	24	24

Completes Line Fast

NEW YORK, May 16.—Completion of the 70-mile oil pipeline between Longview, Tex. and Shreveport, La. has been announced 11 days ahead of schedule by Ford, Bacon & Davis, Inc., engineers on the line for the Arkansas Pipe Line Co., a subsidiary of the Cities Service Co.

Oil was pumped into the line at Longview May 3 and reached Shreveport May 4.

United States imports of paraffin and paraffin wax in 1930 totaled 30,300,000 pounds, compared with 41,000,000 pounds in 1929 and 25,000,000 pounds in 1928.

Kansas Oil Men Move

WICHITA, Kan.—Recently the Kansas Oil Men's Association moved into larger quarters at 822 Central Bldg., Wichita. The association had been for seven years in the First National Bldg., according to J. A. Motter, secretary.

OIL STOCKS AND FINANCES

Low Current Prices Reflected In First Quarter Income

CLEVELAND, May 18

THE most recent reports on first quarter earnings show the effects of current low prices. Nine companies that have issued reports the last two weeks, show large recessions in income as compared with income the first three months of 1930. Only three of the nine companies reported a profit after deduction of depreciation, depletion and other capital reserves. Last year all of the nine companies reported profitable operations the first quarter. An accompanying table compares the net results of the first quarters of 1930 and 1931.

Amerada Corp. reported operating and other income before reserves totaling $903,180, compared with $650,927 last year but a deduction of $979,765 was made for depreciation, depletion and drilling expense this year, compared with $592,702 last year. The large deduction this year resulted in a net loss for the quarter.

The Barnsdall Corp. earnings averaged less than 1 cent a share in the first quarter, compared with 63 cents a share in the first quarter of 1930. In regard to the payment of a dividend of 25 cents a share on the stock May 11, E. B. Reeser, president, said the directors felt stockholders were entitled to the dividend in view of the amounts the corporation has set aside out of earnings for depreciation and depletion reserves and also because many valuable properties have not been included in the book value of the stock.

Continental Oil Co. reduced costs and expense more than $2,300,000 in its effort to offset the effect of low prices and restricted production. Total operating charges the first quarter of 1931 were $3,433,588 less than in the first quarter of 1931. The company retired $2,415,074 of its funded debt the first quarter of this year.

Profits of Houston Oil Co. and its subsidiary, Houston Pipe Line Co., averaged 8 cents a share on the $25 par value common stock this first quarter after dividends on its preferred stock. The first quarter of 1930 the net to common averaged 25 cents a share.

Houston Oil Co., excluding the pipeline company, reported net of $168,433 for the quarter this year, compared with $98,477 last year.

Panhandle Producing & Refining Co. marked down its inventories $18,819, or more than double its net operating income for the quarter.

Simms Petroleum Co. reduced its operating expense 31 per cent the first quarter compared with the first quarter expense last year, Edward T. Moore, president, reported. Crude oil production was down 25 per cent, due to proration. Refinery throughput was cut 9 per cent.

Skelly Oil Co. wrote down inventories approximately $600,000 the first quarter. It cut its expenses more than $300,000 as compared with last year's first quarter expense.

Standard Oil Co. of California had to draw on surplus to pay its first quarter dividends which amounted to $7,953,512.50. Its earnings for the quarter after all reserves and estimated federal income tax amounted to $4,368,609.50.

Income of Texas Pacific Coal & Oil Co., before reserves, was less than 2 per cent of last year's first quarter income. After depreciation and depletion this company reported loss of $225,394.

First Quarterly Earnings

	1931	1930
Amerada Corp.	*$76,585	$58,225
Barnsdall Corp.	1,658	1,420,595
Continental Oil Co.	*2,491,143	†523,302
Houston Oil Co.....	228,703	523,249
Panhandle Producing & Refining Co.	*126,557	37,225
Simms Petroleum Co.	*396,376	37,554
Skelly Oil Co.....	*776,345	547,510
Standard Oil Co., California	4,368,610	9,430,224
Texas Pacific Coal & Oil Co.	‡5,160	‡374,034

*Loss. †Before federal income tax. ‡Before depreciation, depletion, etc.

Phillips Posts Bonds To Cover Interest

NEW YORK, May 15.—It was announced here this week that Phillips Petroleum Co. had deposited with the Chatham Phoenix Bank & Trust Co., trustees, $1,000,000 5¼ per cent debentures to cover the June 1 interest and sinking fund requirements for this issue and that the company held sufficient additional bonds to cover the Dec. 1 requirements.

It was pointed out the Phillips company earned more than $3,000,000 the first quarter after interest and expenses but before capital reserves, or more than the year's requirements for interest.

Creole Judgment Reversed

ALBANY, N. Y., May 15.—A judgment of $385,550 obtained against the Creole Syndicate by Walter G. Filer of California has been reversed in the Court of Appeals of New York. The court exonerated the syndicate of any wrongful acts committed by men who once were connected with the corporation. The suit involved stock deals in the promotion of the allied Creole Corp.

Lone Star Earning More

PITTSBURGH, May 16.—Lone Star Gas Corp. reports net profit of $3,414,827 for the four months ended April 30 after expenses, taxes, depreciation, and dividends on preferred stock. In the corresponding time last year the net was $3,371,477.

Middle States to Pay On Class A Stock

NEW YORK, May 15.—Middle States Petroleum Corp. has declared an initial dividend of 22 cents a share on the 299,954 outstanding Class A no par stock. Dividend is payable June 1 to stock of May 25 record.

This reorganized company and associated companies exclusive of the Louisiana & North West Railroad Co. netted $84,802 in 1930 after all charges. The railroad company netted $43,935. Credits to surplus earnings available for dividends brought the total to $131,211 for 1930. This was equivalent to 44 cents a share on the Class A stock.

Balance sheet of Dec. 31, 1930, shows total assets of $6,237,119. Current assets amounted to $2,619,109 after deduction of reserves for receivership and reorganization expenses and contingencies, and current liabilities to $457,446. Receivership and reorganization expenses during the year amounted to $944,289.

The company carries its Class A stock on the books at $2,052,367 and the 895,529 shares of no par Class B stock at $1.

Daily average production of crude oil by operating subsidiaries was 3028 barrels in December, compared with 3412 barrels in December, 1929. Company bought in February, 1931, 182½ acres of unproven lands in Rusk county, Texas, on which nine wells have been drilled and four are drilling. So far 56,569 barrels of potential production has been developed, the company reported.

Don't Patch! Use the . .

"ACE" ELECTRIC TUBE PLATE

for permanent tube repairs

Low current consumption.

"ACE" will operate 10 hours and use but ½ K. W.

Thermostat control, insuring proper curing temperature.

Plugs into any 110 volt A. C. light socket.

Guaranteed for one year.

Quick action clamp.

Heating plate, size 4x3 in.

Reaches curing temperature in 3 minutes.

Hard rubber block permits equal pressure.

Price $15.00

THE GEWERT MANUFACTURING COMPANY
Reading, Ohio

Write us for

AIR COMPRESSORS
TIRE REPAIR EQUIPMENT
BATTERY EQUIPMENT
HAND TOOLS

FOR 40 CENTS A DAY

the OILGRAM gives you accurate market information you couldn't gather yourself for less than

$40 A DAY

The OILGRAM'S staff at each of the four publication points—Tulsa, Chicago, Cleveland, New York—make *daily* personal calls, and use long distance phone and telegraph services freely in gathering the market information in each day's issue of the OILGRAM.

The OILGRAM brings you the gist of this expensive market check every day at a low cost—$65 for 6 months, or $100 a year, payable in advance—less than 40 cents a day.

Keep yourself posted *daily* on prices and important market developments through the OILGRAM.

Send your order or wire your nearest mailing point, and the OILGRAM will be started to you immediately. Make check payable to The W. C. Platt Company or Platt's Oilgram.

TULSA—904 World Building
CLEVELAND—1213 West Third Street
CHICAGO—35 East Wacker Drive
NEW YORK—342 Madison Avenue

CROSS CRACKING PLANTS

KELLOGG

The M. W. Kellogg Co., 225 Broadway, New York; Tulsa, Okla., Philtower Bldg.; Los Angeles, Cal., 1031 So. Broadway

Transactions in Oil Shares on New York Stock Exchange

1929 High	1929 Low	1930 High	1930 Low	Listed Shares	Par Value	Company	Div. Rate	Last Paid	Transactions Week Ended May 16 Sale	First	High	Low	Last	Change§
42⅝	17½	42¼	16½	922,075	N.P.	Amerada Corp.	50cQ	Jan. 30, 31	5,300	17	17½	17	17⅛	— ⅜
64¾	12½	37	5⅛	209,180	N.P.	American Republics Corp.	....	.....	.....	.....	.....	.....	.....	.....
47¼	34½	51	30	2,240,000	$25	Associated Oil	50cQ	Mar. 31, 31	10	29⅜	29⅜	29⅜	29⅜	0
77⅞	30	51⅜	16⅝	2,683,868	25	Atlantic Refining Co.	25cQ	Mar. 16, 31	6,200	15	15⅜	14½	14⅝	— ⅜
49⅛	20	34	8⅝	2,257,108	25	Barnsdall Corp. A	25cQ	Feb. 16, 31	10,300	8¼	8¼	7½	7⅞	— ⅜
34½	25	35	21	2,060,966	25	California Petroleum Corp.	....	Jan. 1, 29	.....	.....	.....	.....	.....	.....
32⅞	12½	20⅝	8¾	1,444,970	N.P.	Colonial Beacon Oil Co.	....	.....	500	8½	8½	8½	8½	+ ⅛
37¾	18	30½	7¾	4,610,258	N.P.	Continental Oil (Delaware)	....	.....	8,100	7¼	7⅜	6¾	6¾	— ¾
94¾	42¼	71⅛	22⅜	410,857	$100	General Asphalt Co.	75cQ	Mar. 16, 31	18,700	22¼	23⅝	21	21	— 1⅝
109	26	116⅞	29¼	250,000	100	Houston Oil	....	.....	4,400	40	42	36¼	37½	— 3⅜
..	..	10¼	6⅝	.....	..	Houston Oil, new	....	.....	6,900	9⅜	9½	8⅜	8½	— ¼
53	13⅛	28⅜	3	699,066	10	Indian Refining	....	Dec. 15, 20	2,500	2½	2½	2	2	— ½
51¼	11½	27¾	3½	568,816	10	do certificates	....	.....	....	....	....	....	....	.....
38⅜	16½	29½	21¼	3,994,150	N.P.	Lago Oil & Transport	....	Aug. 2, 27	.....	.....	.....	.....	.....	.....
18	7	12	3½	1,187,701	N.P.	Louisiana Oil Refining	....	.....	2,300	3	3	2⅞	2⅞	+ ⅛
100¼	80	89½	60	40,000	$100	do pfd.	$1.62½Q	Feb. 14, 31	.....	.....	.....	.....	.....	.....
18½	5⅞	10⅜	1¾	330,000	N.P.	Maracaibo Oil Exploration	....	.....	400	1⅝	1⅝	1½	1⅝	— ¼
295	176	182	150	459,428	$100	Mexican Petroleum	$3Q	Jan. 20, 31	.....	....	....	....	....	.....
105	102	100	100	120,000	100	do pfd.	$2Q	Jan. 20, 31	.....	....	....	....	....	.....
69⅜	9¼	37	9¾	1,244,383	N.P.	Mexican Seaboard Oil	....	Oct. 15, 24	19,800	15⅞	16½	14¾	15¼	— ⅝
39⅞	22⅛	33	11	1,899,138	N.P.	Mid-Continent Petroleum	50cQ	Feb. 16, 31	2,500	9¼	9¼	8½	8½	— ½
3⅝	¾	2½	¾	908,171	N.P.	Middle States Oil ctfs.	....	.....	.....	.....	.....	.....	.....	.....
..	..	32	16	6,708,086	N.P.	Ohio Oil Co.	25cQ	Mar. 14, 31	16,700	8⅞	8⅞	8⅜	8½	— ⅛
69	40¼	64¼	42	1,000,000	$50	Pan Amer. Petrol. & Trans.	....	Oct. 20, 27	100	30½	30½	30½	30½	+ ½
69¼	40½	67½	32	2,422,221	50	do B	....	Oct. 20, 27	300	29½	30	29½	29⅞	+ ⅞
15¼	3	12¾	1¾	199,370	N.P.	Panhandle Prod. & Refg.	....	.....	300	2	2⅛	2	2	— ¼
76	47½	80	47½	25,666	$100	do pfd.	....	July 2, 23	30	15	15	15	15	.....
..	..	27½	6	2,937,900	N.P.	Petroleum Corp. of America	37½cQ	Dec. 31, 30	10,800	7	7⅛	6½	6½	— ¼
47	24¼	44¾	12	2,670,089	N.P.	Phillips Petroleum Co.	50cQ	Jan. 2, 31	15,700	7⅝	7⅝	7	7⅛	— ⅜
3⅜	1	2½	½	1,184,917	$25	Pierce Oil Corp.	....	.....	1,300	⅝	¾	⅝	⅝	0
51½	20	52	7½	150,000	100	do pfd.	....	Feb. 1, 22	100	10	10	10	10	— 1
5⅞	½	7⅛	1⅜	2,500,000	N.P.	Pierce Petroleum Corp.	10c	Feb. 16, 31	4,900	1¾	1⅞	1½	1⅝	0
65⅜	40½	54	11¼	2,435,670	$25	Prairie Oil & Gas Co.	50cQ	Mar. 31, 31	8,700	10½	11	9¼	9¼	— 1¼
65	45	60	16⅝	4,050,000	25	Prairie Pipe Line Co.	75cQ	Mar. 31, 31	3,100	19⅜	21⅜	19½	21⅜	+ 1¾
25⅞	4	31	1	749,017	50	Producers & Refiners Corp.	....	Sept. 15, 23	300	3	3¼	3	3¼	+ ¼
46¾	25½	38	11½	56,907	50	do pfd.	....	May 4, 25	.....	.....	.....	.....	.....	.....
30¾	20	27¼	7⅝	3,038,370	25	Pure Oil Co.	....	Sept. 1, 30	7,000	6⅛	6½	6	6½	+ ⅜
116	108	114¼	90½	130,000	100	do 8% pfd.	$2Q	Apr. 1, 31	290	77⅝	77⅝	72½	77	— 1¾
49⅝	22⅝	28¼	4⅛	2,891,735	25	Richfield Oil (California)	....	Sept. 1, 30	2,500	1½	1½	1¼	1¼	0
42½	15	25¾	5	1,235,270	N.P.	Rio Grande Oil Co.	....	July 25, 30	3,300	4¾	4¾	4¾	4½	0
64	43¼	56½	37⅛	951,310	$13.40	Royal Dutch (N. Y. shares)	$1.3404	Jan. 31, 31	23,200	30¾	32	28⅛	29	— 1⅜
55¾	43⅜	48⅜	26	77,492	£2	Shell Trans. & Trading	96.6c	Jan. 23, 31	.....	.....	.....	.....	.....	.....
31¾	19	25½	5⅞	13,069,076	N.P.	Shell Union Oil Corp.	....	June 30, 30	18,800	5½	5⅝	4½	4⅜	— ¼
..	..	106¼	62	400,000	100	do pfd.	$1.37½Q	Apr. 1, 31	1,800	29½	32	27	30	0
40⅛	15	37	5⅝	869,255	10	Simms Petroleum Co.	....	Sept. 15, 30	400	6	6	5⅞	5⅞	— ⅛
45	21	32	9¾	5,455,665	N.P.	Sinclair Consolidated Oil Corp.	25cQ	Jan. 15, 31	20,000	9⅛	9¼	8½	8½	— ⅛
111	103	112¼	86	154,685	100	do pfd.	$2Q	Feb. 14, 31	900	92	92	84	84	—11
46½	42	42	10⅛	1,097,650	$25	Skelly Oil Co.	50cQ	Dec. 15, 30	3,200	5⅜	5⅜	4½	4½	— ⅝
..	..	99¾	43	120,000	100	do pfd.	$1.50Q	Feb. 1, 31	.....	.....	.....	.....	.....	.....
..	..	106	98	750,000	100	S. O. Export Corp. pfd.	$2.50S.A.	Dec. 31, 30	100	104	104	104	104	0
81⅞	51½	75	42¼	13,016,434	N.P.	S. O. California	62½cQ	Mar. 16, 31	18,400	37¾	37⅞	35	35⅝	— 1½
..	..	49	14⅜	320,000	$25	S. O. Kansas	25cQ	Mar. 16, 31	200	11⅜	11½	11⅜	11⅜	— 1⅛
83	48	84⅞	43½	25,443,643	25	S. O. New Jersey	‡25cQ	Mar. 16, 31	54,600	36¾	37¼	34⅝	35¼	— 1⅜
48⅛	31¾	40⅜	19¾	17,809,530	25	S. O. New York	40cQ	Mar. 16, 31	22,500	18⅞	19	18	18⅛	— ⅝
86⅜	55	70	39	1,416,911	N.P.	Sun Oil Co.	25cQ	Mar. 16, 31	600	34⅜	35	34⅜	35	0
105½	100	107¾	97¾	100,000	$100	do pfd.	$1.50Q	Mar. 2, 31	200	98	98	95	95	— 1½
24	5¼	9⅜	¾	1,026,979	N.P.	Superior Oil Corp.	....	.....	800	1	1	⅞	1	+ ¼
71⅞	50	60½	28¼	9,850,724	$25	The Texas Corp.	75cQ	Apr. 1, 31	80,100	20½	20⅞	18⅞	19½	— 1
23⅞	9½	14½	4	929,947	10	Texas Pacific Coal & Oil	....	Dec. 31, 29	1,100	4⅛	4⅛	4	4	0
23½	10	17¾	5⅞	5,881,980	N.P.	Tide Water Associated Oil.	30cS.A.	Feb. 16, 31	11,000	4¾	5	4¼	4¼	— ½
90⅞	74⅛	89¾	56	732,550	$100	do pfd.	$1.50Q	Jan. 2, 31	3,000	49	49	44¾	44¾	— 4¼
40	14	31	13	2,191,820	N.P.	Tide Water Oil Co.	20cQ	Dec. 31, 30	.....	....	....	....	....	.....
97½	85⅛	94⅞	71	199,443	$100	do pfd.	$1.25Q	Feb. 16, 31	.....	....	....	....	....	.....
..	..	24	12⅛	3,339,150	N.P.	Transcontinental Oil.	....	May 1, 30	.....	.....	.....	.....	.....	.....
57	42⅛	50	20⅛	2,201,008	$25	Union Oil Co. (California)	50cQ	Feb. 10, 31	3,300	17⅛	17⅛	15⅞	16½	— ⅝
..	..	38½	23	1,254,048	N.P.	Union Tank Car Co.	40cQ	Mar. 2, 31	2,300	21	21	20	20	— ⅝
42⅞	15	27	4½	777,603	N.P.	Warner Quinlan Co.	....	July 3, 30	900	3½	3½	3½	3½	— ⅛
38	25	29½	26	490,000	N.P.	White Eagle Oil & Refg.	....	Apr. 20, 30	.....	....	....	....	....	.....
29¾	12⅞	21	6½	428,967	N.P.	Wilcox Oil & Gas Co.	....	May 10, 28	1,400	7	7	5¾	5¾	— 1¼

*New high †New low ‡Also extra s-Stock §From close of preceding week. Total sales 432,430

Pittsburgh Stock Exchange

Transactions Week Ended May 15, 1931

	Sales	High	Low	Last	Change Over Week
Ark. Nat. Gas....	25	6¼	†6¼	6¼	— ½
Lone Star Gas....	11,141	17⅝	16	16½	+ ¼
Plymouth Oil....	685	9⅜	†8⅞	9	— ½
Shamrock O. & G.	600	6⅜	5	5	—1½
West. Pub. Serv...	1,590	8⅛	7¾	7⅞	— ⅜
Wiser Oil.....	50	9	9	9	—1

†New low record.

McColl Frontenac Earnings

TORONTO, May 15.—McColl Frontenac Oil Co., Ltd., reports net profit of $1,191,983 for the year ended Jan. 31, 1931. After dividends on preferred stock and all charges this sum averaged $1.43 a share on the 496,390 shares of no par common stock outstanding. In the preceding fiscal year the company netted $1,431,970, or $1.91 a share, on the 500,000 shares of common stock then outstanding. Operating income was larger in the year ended Jan. 31, 1931, but net was reduced because of increases, reserves for depreciation and bad debts and higher fixed charges.

Three More Companies Pass Dividends

CLEVELAND, May 18.—Three more companies have omitted dividends. They are Ohio Oil Co., Prairie Oil & Gas Co. and Pierce Petroleum Co.

The omission by Ohio Oil on its common stock is the first since the dissolution of Standard Oil that a dividend has been passed. The company has paid as high as 96 per cent on its common. The directors decided to pass the current dividend, it was stated in dispatches from the company's headquarters at Findlay, because of the present unstable condition in the oil industry.

Ohio Oil has the greatest oil reserves in its history, it was stated, and its refinery sales are exceeding sales in any previous year. But prices are so low directors decided it advisable to conserve cash. Dividends are continuing on the preferred stock.

Prairie Oil & Gas Co. has passed dividends in the past. This company has large stocks of crude oil which represent an investment in excess of current market prices.

Pierce Petroleum Co.'s income is derived from its holdings of Sinclair Consolidated Oil Corp. stock which it intends to distribute to stockholders and dissolve the company as soon as income and excess profit tax matters now in controversy are settled.

Vacuum Oil Co. has reduced its dividend basis from $4 a year to $2 a year.

Cleveland Stock Market

May 16, 1931

	Bid	Asked	Last Sale
Canfield Oil.....	...	110	85
F. G. Clark.....	1¼	1½	2
National Refining.....	17⅞	18½	18⅛
do pfd.....	132	133	133

Financial Notes

Atlantic Refining Co.—John D. Gill was elected a director at annual meeting. Other directors were re-elected. At organization meeting J. W. Liberton and E. J. Henry were elected additional vice-presidents. Other officers were re-elected.

Atlantic Lobos Oil Co.—All directors re-elected at annual meeting.

Amerada Corp. — Board reduced from 11 to nine members. These directors elected: L. W. Baldwin, A. M. Blow, E. DeGolyer, J. H. Hillman, Jr., A. Jacobsen, H. W. Masters, Dean Mathey, E. B. Tracy, and R. M. Youngs.

Chesebrough Mfg. Co.—All directors re-elected at annual meeting. All officers subsequently re-elected.

Continental Oil Co. — All retiring directors re-elected at annual meeting.

National Transit Co.—All directors and officers re-elected just previous to death of L. E. Lockwood, president.

Standard Oil Co. of California—All directors and officers re-elected.

Standard Oil Co. of Indiana—Reorganization under modern corporation law of Indiana authorized at annual meeting. Plan calls for board of directors of 15 members if deemed advisable. Two new members were added to old board of 11 members. They are L. L. Stephens, general counsel, and Robert E. Wilson, in charge of development and patent matters.

Merger Deal is Dormant

SAN FRANCISCO, May 14.—K. R. Kingsbury, president, Standard Oil Co. of California, when questioned at the annual meeting about possibility of a consolidation with Standard Oil Co. (N. J.) said there have been no developments since preliminary negotiations early last year. It was reported later last year that the U. S. Department of Justice did not approve of the proposed merging of the California and New Jersey companies.

Gas Line Given Franchise

CHICAGO, May 15.—The Panhandle Illinois Pipe Line Co. has been issued a certificate of convenience by the Illinois Commerce Commission. This company will lay and operate a natural gas line in Illinois to be supplied by gas from the Texas Panhandle as part of the Missouri-Kansas Pipe Line Co. and Columnia Gas & Electric Co. system.

Hood to Manage National Barrel

R. E. E. Hood, formerly with the Marland Oil Co. in charge of domestic eastern and foreign departments has been elected vice-president and general manager of the National Steel Barrel Co., of Cleveland.

THE OIL INDUSTRY EXCHANGE

Positions Wanted

SALES EXECUTIVE experienced marketer petroleum products. Service station, refinery sales. Conversant with lubrication, grease application and manufacture. Traffic and package economy. Budgetary control. Address Box 704.

SALESMAN WITH 7 years wholesale and retail experience marketing all petroleum products, desires new connection. Have proven sales record. Thorough knowledge of marketing. Age 30. Now located near New York City. Wages, secondary to opportunity for advancement. Address "C. C.," Room 1124, 342 Madison avenue, New York City.

SALES EXECUTIVE—Engineering graduate experienced marketer petroleum products specializing in lubricating oils, greases and solvents. Best references. Address Box 721.

CHEMICAL ENGINEERING GRADUATE with one year varied refining experience desires new connection, development or experimental work preferred. Address Box 722.

Situations Open

UNUSUAL OPPORTUNITY—MAJOR OIL COMPANY wants SALES MANAGER—BULK SALES

Eastern Seaboard Refiners—Tank Car and Barge Sales—Branded and unbranded Gasolines and Lubricants. Vacancy created by promotion. Give complete statement of experience.

Address Box 720

Professional Services

ROYAL E. BURNHAM
Attorney-At-Law
Patent and Trade-Mark Practice Exclusively
Continental Trust Building
Washington, D. C.

Miscellaneous

WHAT IT COSTS

"For Sale," "Wanted to Buy," "Help Wanted," "Business Opportunities."

"Miscellaneous" classifications, set in type this size without border—10 cents a word. Minimum charge, $3.00.

"Position Wanted"—5 cents a word. Minimum charge $1.00.

Advertisements set in special type or with border—$4.00 per column inch.

Copy must reach us not later than Friday preceding date of issue.

All advertisements carried on this page are payable in advance.

Business Opportunities

80 new 4" Hills McCanna No. 45 metal screwed type aluminum bronze still plugs for high pressure return bends. Also 2½" & 5" new and second hand cast iron pipe fittings.

Purchasing Dept., Box 36,
St. Louis, Mo.

For Sale

We have ten of the fastest selling specialties for the automotive trade. We want financially responsible specialty organizations or qualified individuals to represent us in open territories. Price range from 50c to $25.00. Margin allows distributor to build permanent organization and business.

Brandfield Corporation,
174 Lafayette St.,
New York City

Miscellaneous

YOU SHOULD GET AS MANY ANSWERS AS THIS MAN DID

Recently the head of a large marketing company realized that some of their outgrown equipment might be turned into cash. He ran an ad on this page and this is what he wrote us a couple of weeks later.

"We are very much pleased with the results obtained from our ad and feel very well repaid as we have received a great many answers."

Try it yourself. The rates are below.

Advertisers having box numbers should be addressed in care of National Petroleum News, 1213 West 3rd Street, Cleveland, Ohio, unless otherwise specified.

Standard Oil Stocks on New York Curb

1929 High	1929 Low	1930 High	1930 Low	Outstanding Shares	Par Value	Companies	Div. Rate	Last Paid	Transactions Week Ended May 16 Sales	First	High	Low	Last	Change§
18¾	13½	18½	12¼	.....	£1	Anglo-Amer. Oil voting stk. ctfs..	.....	June 5, 29	.....	....	....	....	....	.....
17⅛	11	19	12	.....	£1	do non-voting stk. ctfs.....	.....	June 5, 29	.....	....	....	....	....	.....
2⅛	¾	1	⅜	500,000	N.P.	Atlantic Lobos Oil.....	.....	.....	.....	....	....	....	....	.....
4⅛	1	1½	⅜	200,000	$50	do pfd.....	.....	.....	.....	....	....	....	....	.....
46½	25	25	11¼	40,000	25	Borne Scrymser Co.....	$1S.A.	Oct. 15, 30	.....	....	....	....	....	.....
74¼	55	69	39⅞	200,000	50	Buckeye Pipe Line Co.....	$1Q	Mar. 14, 31	100	46⅜	46⅜	46⅜	46⅜	— ⅜
210	130	184⅞	100¼	120,000	25	Chesebrough Mfg. Co.....	‡$1Q	Mar. 31, 31	100	119	119	119	119	— 1
11¾	5⅜	7⅜	3	.....	N.P.	Creole Petroleum Co.....	.....	.....	3,600	2⅛	2⅛	2	2	— ⅛
75¾	40	65¾	20¼	30,000	$50	Cumberland Pipe Line Co.....	50cQ	Mar. 16, 31	.....	....	....	....	....	.....
70½	42	54¾	26	50,000	100	Eureka Pipe Line Co.....	$1Q	Feb. 2, 31	.....	....	....	....	....	.....
...	...	6¾	2½	280,000	N.P.	Galena Oil Corp. w.i.....	.....	.....	.....	....	....	....	....	.....
...	...	37¼	23⅛	.....	N.P.	General Petroleum Corp. w.i.....	.....	.....	.....	....	....	....	....	.....
128	74⅛	119	57¼	2,974,645	$25	Humble Oil & Refg. Co.....	‡50cQ	Jan. 1, 31	3,300	53⅛	53½	52¾	52¾	— ⅜
41	22	30	15	26,490,741	N.P.	Imperial Oil, Ltd.....	12½cQ	Mar. 2, 31	4,800	12⅞	13	12	12	— 1
42⅛	26	41	14½	300,000	$10	Indiana Pipe Line Co.....	50cQ	Feb. 14, 31	600	14	14	12½	13	0
29⅜	15	24	11⅜	14,247,880	N.P.	International Petroleum Co.....	25c	Dec. 15, 30	9,500	12	12⅛	11¼	11¼	— ¾
25⅞	10⅜	22⅜	11½	509,000	$12½	National Transit Co.....	25cQ	Mar. 16, 31	600	13¼	13¼	12¾	12¾	— ⅜
17¾	10	21	10¼	100,000	10	New York Transit Co.....	40cQ	Jan. 15, 31	200	9⅛	9⅛	9	9	— ⅛
63	41	54	26¼	40,000	50	Northern Pipe Line Co.....	$2S.A.	Jan. 2, 31	.....	....	....	....	....	.....
105⅛	103¾	108	100⅛	600,000	100	Ohio Oil pfd.....	$1.50Q	Mar. 14, 31	100	95	95	95	95	— 3
44⅛	18⅜	32	12	400,000	25	Penn Mex. Fuel Co.....	$1	Dec. 15, 30	100	12	12	12	12	+ 1⅞
50	29	33	4⅞	160,000	25	Solar Refining Co.....	...	Dec. 20, 29	100	4	4	4	4	— 1⅜
23⅛	13	20⅛	6¾	100,000	10	Southern Pipe Line Co.....	50c	Mar. 12, 31	100	15	15	15	15	0
60¼	35⅜	45⅞	18	1,200,000	25	South Penn Oil Co	25cQ	Mar. 31, 31	3,400	13⅞	13⅜	13¼	13¼	— ¼
70	45	64	32	35,000	50	Southwest Pa. Pipe Lines.....	$1Q	Apr. 1, 31	.....	....	....	....	....	.....
63	45	59⅞	30	16,850,587	25	S. O. Indiana	50cQ	Mar. 16, 31	15,100	26¾	26⅞	25½	25⅝	0
46⅞	29	40½	18⅞	2,577,124	10	S. O. Kentucky.....	40cQ	Mar. 31, 31	2,500	17¾	18	17	17⅜	— ⅝
50¼	40	48⅞	34	188,159	25	S. O. Nebraska.....	50cQ	Mar. 20, 31	.....	....	....	....	....	.....
129	60	108½	43¼	560,000	25	S. O. Ohio.....	62½cQ	Apr. 1, 31	150	48	48	46⅞	46⅞	— 1⅜
...	...	...	...	120,000	100	do 5% pfd.....	$1.25Q	Jan. 15, 31	.....	....	....	....	....	.....
124½	113½	122	115¼	70,000	100	do 7% pfd.....	$1.75Q	Dec. 1, 30	.....	....	....	....	....	.....
18	5⅛	10	4	34,158	25	Swan Finch Oil Corp.....	...	Jan. 15, 29	.....	....	....	....	....	.....
133¾	75⅛	97⅛	45⅝	5,139,887	25	Vacuum Oil Co.....	$1Q	Mar. 20, 31	16,100	33¼	34⅞	31	31¾	— ¾

*New high †New low ‡Also extra §From close of preceding week.

Independent Oils on New York Curb

1929 High	1929 Low	1930 High	1930 Low	Par Value	Companies	Transactions Week Ended May 16 Sales	First	High	Low	Last	Change§
.72	⅛	⅜	1/16	$1	Amer. Contr. Oilfields	.....	....	....	....	....	.....
8⅝	1⅛	4½	½	5	Amer. Maracaibo....	2,600	1	1	¾	¾	— ⅛
4¾	1	1⅜	1⅛	10	Argo Oil.....	.....	....	....	....	....	.....
26	3¾	16¾	4⅜	N.P.	Arkansas Nat. Gas...	1,400	4½	4¾	4½	4½	0
24¾	6½	16⅝	4¾	N.P.	do Class A.....	8,000	4½	4¾	4⅜	4⅜	0
9	4	8⅛	6¼	10	do pfd.....	200	6⅛	6⅛	6⅛	6⅛	0
70	50	28½	13½	N.P.	British American Oil..	.....	....	....	....	....	.....
4⅞	⅛	2¾	⅝	¼	Carib Syndicate.....	200	1¼	1¼	1⅛	1⅛	— ¼
68½	20	44¼	13⅛	N.P.	Cities Service.....	97,500	14⅞	15	13½	13¾	— 1⅜
99¼	84	93⅞	52	100	do pfd.....	2,600	80	80	78½	79	— 1
9¼	8	9	7¼	10	do pref. B.....	300	6⅛	6½	6⅛	6½	0
96	81	89⅞	80	100	do pref. BB.....	100	81⅜	81⅜	81⅜	81⅜	+ ⅞
1½	¼	1/16	⅛	1	Colombia Syndicate..	800	1/16	1/16	⅛	1/16	0
15	3⅞	8¼	1⅜	N.P.	Colon Oil Corp.....	2,700	1¼	1¼	1¼	1¼	0
...	...	21	3⅜	N.P.	Columbia Oil & Gas..	1,400	3⅝	3¾	3¼	3¼	— ½
11⅛	2½	5⅞	2	10	Consolidated Royalty	200	1⅞	1⅞	1⅝	1⅝	— ⅛
135	42	74¾	1½	N.P.	Cosden Oil Co.....	1,100	1¼	1¼	1¼	1¼	+ ¼
87	55	70	10¼	100	do pfd.....	.....	....	....	....	....	.....
2½	¼	1	¼	N.P.	Crown Central Pet...	900	⅜	⅜	⅜	⅜	0
11½	4	..	..	N.P.	Crystal Oil.....	.....	....	....	....	....	.....
51⅛	51⅛	..	..	100	do pfd.....	.....	....	....	....	....	.....
26	6½	13½	4¼	N.P.	Darby Petroleum.....	300	3	3	2⅛	2¼	— ⅛
..	..	21¾	21½	N.P.	do new.....	.....	....	....	....	....	.....
11	2	11	2	N.P.	Derby Oil & Refg.....	200	3¼	3¼	3	3	0
44	17	60	30	N.P.	do pfd.....	.....	....	....	....	....	.....
...	...	12	12	10	Devonian Oil.....	.....	....	....	....	....	.....
209	115	166⅞	58½	$25	Gulf Oil Corp.....	1,800	51¾	51¾	50	50	— 1
7½	1⅛	4	2¼	N.P.	Homaokla Oil.....	.....	....	....	....	....	.....
..	..	47½	12¾	N.P.	Indian Territory A....	200	13	13	12⅞	12⅞	— ⅜
..	..	53½	12⅝	N.P.	do B.....	.....	....	....	....	....	.....
2⅞	⅜	1¾	⅜	10	Intercontinental Pet..	2,400	1/16	1/16	⅜	1/16	0
3⅝	1¼	3	⅞	N.P.	Kirby Petroleum.....	1,300	¾	¾	½	½	— ¼
6⅛	1	4¾	½	N.P.	Leonard Oil & Dev...	200	½	½	½	½	— ⅛
38⅞	18	29	5	N.P.	Lion Oil Refg.....	.....	....	....	....	....	.....
67⅞	28	55⅞	19⅝	N.P.	Lone Star Gas.....	5,500	16¼	18⅛	16⅛	17	+ ⅝
..	..	31	5½	$25	MacMillan Petrol....	.....	....	....	....	....	.....
2⅞	¼	½	⅛	1	Magdalena Synd.....	900	⅜	⅜	1/16	⅜	0
38½	14	16	3	N P.	Margay Oil.....	100	5	5	5	5	+ 1
6⅜	2¼	7½	1¾	N P.	Mexico Ohio Oil.....	600	3½	3½	3½	3½	+ ½
..	..	11⅞	2¼	N .P.	Middle States A v.t.c.	600	3¼	3½	3	3	+ ¼
..	..	6	¾	N .P.	do Class B v.t.c.	900	⅞	1	⅞	1	+ ⅛
42	8	36¼	5	5	Missouri-Kansas P.L.	6,600	6	6⅛	5⅛	5⅛	— 1
1½	¼	¾	⅜	1	Mountain & Gulf Oil.	400	¼	1/16	¼	1/16	+ 1/16
22⅞	7	12⅜	4½	10	Mountain Producers..	100	3⅞	3⅞	3⅞	3⅞	0
43⅞	24	41⅜	19⅞	N.P.	Nat. Fuel Gas.....	2,400	19⅝	20⅛	19½	19½	0
5	2¼	3½	1⅛	$5	New Bradford Oil....	600	1	1⅛	1	1⅛	+ 1/16
4¾	3⅛	3⅛	2⅛	10	New England Fuel...	.....	....	....	....	....	.....
24½	11⅛	16⅞	4	25	N. Y. Pet. Royalty...	.....	....	....	....	....	.....
18½	6⅛	11¼	2⅛	N.P.	North Central Texas	.....	....	....	....	....	.....
19¼	8⅛	11⅜	3⅞	N.P.	Oilstocks Ltd. A.....	.....	....	....	....	....	.....
18¼	8½	11½	4¾	N.P.	do B.....	.....	....	....	....	....	.....
26⅜	12⅛	19½	6½	N.P.	Pacific Western Oil...	700	6½	6½	5⅜	5⅜	— ⅞
3½	½	2½	¼	N.P.	Pandem Oil.....	7,100	⅜	⅜	1/16	⅜	0
10½	2¼	4⅜	1	N.P.	Pantepec Oil.....	.....	....	....	....	....	.....
25½	13⅛	15	13⅛	$25	Paragon Refg. B. ctfs.	.....	....	....	....	....	.....
28	17	29	19⅛	N.P.	Petroleum Corp.....	.....	....	....	....	....	.....
..	..	5⅞	½	....	do warrants.....	.....	....	....	....	....	.....
37	22	27½	16¼	N.P.	Plymouth Oil.....	500	9¼	9¼	9	9	— ⅜
16	9	10½	3	$5	Red Bank Oil.....	600	2½	2½	2½	2½	+ ¾
8½	1⅛	5⅜	1	N.P.	Reiter-Foster Oil.....	800	1	1	⅞	⅞	0
25¼	19	23½	7	25	Richfield Oil pfd.....	200	2¼	2¼	2¼	2¼	0
29	13	25	2¼	N.P.	Root Refining pr. pfd.	200	2¼	2	1⅞	2	0
11	3	8⅝	2	N.P.	Ryan Consolidated....	100	1¾	1¾	1¾	1¾	— ¼
5⅞	1⅞	2½	½	10	Salt Creek Consol....	.....	....	....	....	....	.....
25⅞	9	15¼	5¼	10	Salt Creek Producers.	400	5⅛	5⅛	4⅝	4⅝	— ½
33⅛	10	8	1¾	25	Shreveport El Dorado	.....	....	....	....	....	.....
..	..	39⅛	39	25	Signal Oil & Gas A...	.....	....	....	....	....	.....
24	9	17	6	N.P.	Southland Royalty...	300	4⅛	4¼	4⅛	4¼	0
12	4	10	2	5	Sunray Oil.....	7,400	2⅜	2⅝	1¾	2	— ½
23	7⅛	19½	8	N.P.	Texon Oil & Land....	1,200	9	9	8⅛	8⅛	— ⅞
81⅛	8⅞	16	8	10	Venezuela Mexico....	.....	....	....	....	....	.....
6½	1⅛	4½	¾	5	Venezuela Petroleum.	.....	....	....	....	....	.....
9⅛	2	5	2	1	Woodley Petroleum..	.....	....	....	....	....	.....
5⅜	¼	2½	⅜	N.P.	Y Oil & Gas.....	100	¼	¼	¼	¼	— ⅜

*New High †New Low §From close of preceding week.

New York Bonds

Week Ending May 15

	High	Low	Last	Change§
Asso. Oil gold 6s.....	102⅞	102⅝	102⅞	— ⅛
Atlantic Refg. deb. 5s...	101¼	101	101½	+ ½
Cal. Pet. 5s.....	89	89	89	— 1
Cal. Pet. 5½s.....	92½	91¼	91¼	+ ¾
General Pet. 5s.....	102½	102	102½	0
Humble Oil & Refg. 5s..	101	100¾	101	+ ⅜
Humble Oil & Refg. 5½s	102⅞	102½	102⅝	+ ⅛
Pan Amer. P. & T. 6s....	102	101⅝	101⅞	+ ¼
Pan Amer. P. & T. 6s....	42½	40⅜	40½	—1¾
Phillips Pet. 5½s.....	65	50	60	+ ⅞
Pure Oil 5½s.....	83	82	83	0
Pure Oil 5½s.....	75½	74	75¼	+ ¼
Richfield Oil Co. of Calif. 6s	38⅜	35¼	35¼	—3¾
Shell Union Oil 5s.....	69¼	65	70	+4
Shell Union Oil 5s with war	71¼	65	71	+3¼
Sinclair Con. Oil 7s.....	94	92⅛	92⅛	— ⅞
Sinclair Con. Oil 6½s....	86¼	83½	83½	—2¾
Sinclair Con. Crude 5½s.	102¼	101⅞	101⅞	— ⅛
Sinclair Pipeline.....	100¼	100	100¼	0
S. O. N. J. 5s.....	103½	103	103¼	— ¼
S. O. N. Y. 4½s.....	99⅛	98	98½	+ ½
Union Oil of Calif. 6s A..	105¾	104	105½	+1½
Union Oil of Calif. 5s C..	98½	97⅞	98½	0
Union Oil of Calif. 5s war.	89	89	89	+1¼
Warner-Quinlan 6s.....	51¼	50¾	50¾	— ½
White Eagle Oil 5½s....	103	102½	102¾	+ ⅜

New York Curb Bonds

Week Ending May 15

	High	Low	Last	Change§
Beacon Oil 6s '36.....	98	98	98	— ½
Cities Serv. 5s '66.....	68½	66⅞	66⅞	—6
Cities Serv. 5s '50.....	70⅞	67⅝	67¾	—3¼
Cities Serv. G. 5½s '42..	71¾	70	70	—1½
Cities Serv. G. P. 6s '43.	84	83¼	83¼	— ¾
Cont. Oil 5¼s '37.....	88½	83	83½	—9
Empire O. & R. 5½s '42.	70⅛	63	63	—7⅛
Gulf Oil 5s '37.....	101¾	101	101	— ¾
Gulf Oil 5s '47.....	101⅛	100	100⅜	— ½
Independent Oil 6s '39...	79	73	73¼	—4¾
Sun Oil 5½s '39.....	102¾	101	101¼	+ ¼

Oil Dividends

	Amount	Payable	Stock of Record
Atlantic Refining q.....	25c	June 15	May 21
British American Oil q...	20c	July 2	June 13
Cumberland Pipe Line q.	50c	June 15	May 29
General Asphalt q.....	75c	June 15	June 1
International Pet. q.....	25c	June 15	May 30
Imperial Oil q.....	12½c	June 1	May 15
McColl Frontenac Oil q.	15c	June 15	May 15
Northern Pipe Line q...	$1.50	July 1	June 12
do extra.....	75c	July 1	June 12
Ohio Oil pfd. q.....	$1.50	June 15	May 16
Pure Oil 5¼% pfd. q....	$1.25	July 1	June 10
do 6% pfd. q.....	$1.50	July 1	June 10
do 8% pfd. q.....	$2	July 1	June 10
Royal Dutch Co. final...	7%	.....	.....
Shell T. & T. final.....	7½%	.....	.....
S. O. California q.....	62½c	June 15	May 16
S. O. Nebraska q.....	50c	June 20	May 28
S. O. New Jersey q.....	25c	June 15	May 16
do extra.....	25c	June 15	May 16
S. O. New York q.....	40c	June 15	May 8
Union Tank Car q.....	40c	June 1	May 16
Vacuum Oil q.....	50c	June 20	May 29
Valvoline Oil q.....	$1.50	June 17	June 13
do pfd q.....	$2	July 1	June 18